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OF THEOLOGY AND PHILOSOPHY

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THE BASIS OF THE SUAREZIAN TEACHING ON HUMAN FREEDOM

WE propose in these pages to undertake a fresh analysis of the teaching of Francisco Suarez on human freedom and God's causality of a free human act. Our purpose is to point out just what the roots of that teaching are. The suspicion arises almost at once that any such study is useless, wasteful, and harmful: useless, because what is of primary importance to man is to have God's grace rather than to dispute its nature; wasteful, because far greater men have, over a long period of time, disputed this very matter and failed to reach a solution commonly accepted, so that we should be content to accept the nature of grace as a mystery not to be toyed with by our unskilled minds; harmful, because it might possibly be provocative of further dispute.

Yet we are convinced the analysis ought to be undertaken, first, and most important of all, because of the inherent importance of the question in itself. The questions of the nature

of man's freedom, and of God's motion of that free will are vital to every Christian, for upon the answers given them depend the whole character of one's spirituality and, to a large extent, of one's relationship to God Himself. The spirituality of one who accepts the intrinsic efficacy of God's efficacious helps is bound to be altogether God-centered; his attitude to God is one of completely relaxed and limitless trust. The spirituality, on the other hand, of the practical Congruist is bound to have its egocentric side: for if, as Congruists—among them Suarez—hold, the determination that grace shall be efficacious comes from the created will, so that, metaphysically speaking, it is possible that there be some men whom the All-powerful God cannot save, then, very clearly, our spirituality must be in very important part self-centered. If the ultimate and determining element in saving my soul is myself—and Suarez teaches that it is—then in the effecting of my own perfection it is I, and not God, who is of ultimate importance and my whole spirituality must be shaped accordingly. Now in practical Christian life a choice must be made of one or the other outlook, and the choice is of very real importance in our day-to-day living. According as one chooses one or the other one puts ultimate trust either in God or himself.

It seems to us that Father Garrigou-Lagrange has expressed this point extremely well when he wrote, " It has been said that the Thomist must abandon his doctrine when he enters his oratory. On the contrary it is during his moments of insubordination and pride that he forgets his doctrine of the subordination of causes. Freed from all illusion he must say that of himself he is nothing. . . . It would be a great illusion to think that what is better in us and of a salutary nature, the good use of our liberty and of grace, our free determination is exclusively our work and does not come from God. . . . In truth when the Molinist prays (and the same can be applied to the Congruist) he thinks like us that it is an old and absurd dream to believe that we are or do something good of ourselves and independently of God . . . of ourselves we are nothing. If we deduct

from ourselves what we have received from God and what He unceasingly preserves in us, in strictness of terminology, without any metaphor, there is nothing left. . . . How can our free determination be exclusively our act? How can it depend solely upon ourselves that the grace of God is made efficacious or sterile? Of ourselves we are less than nothing."

" Were St. Augustine and St. Thomas in their hours of prayer and adoration 'humble Molinists'? Humility does not consist in diminishing God's glory or His supremacy, but in recognizing our nothingness before Him. . . . The Molinist (and Congruist) in his hours of intense prayer, forgets his doctrine and says with the Scripture: '. . . Convert me, O Lord, to thee and I shall be converted.' " [1]

" A whole book could be written on the difference between the spiritual direction based on the teaching of St. Augustine and St. Thomas and that based on Molinism (and Congruism). The former is more divine, more supernatural, simpler, and also, . . . more exacting. It recommends far more the need of prayer, abandonment to divine Providence. . . . The latter is more human, more complicated, more external; it inclines the soul rather to examine itself than to see God's action in us; it is consequently less exacting (probabilism) for one cannot ask much of a man who cannot rely upon God in coming to a firm resolution and keeping it . . . one would see that authors of the spiritual life who had to receive their training in the Molinist or Congruist school have been led . . . to speak of fidelity to grace and abandonment to divine Providence like most convinced Thomists." [2]

" The objection against Thomism is that it is a discouraging doctrine. Instead of being opposed to the virtue of hope, it induces us to place all our trust in God and not in ourselves. On the other hand, what is there more discouraging than the doctrine which would have to result in maintaining that God

[1] Garrigou-Lagrange, O.P., Rev., *God: His Existence and His Nature,* Herder, St. Louis, 1937, Vol. II, pp. 378-379.

[2] Grace, S.J., Rev., *Maximes Spirituelles*; de Caussade, S.J., Rev.. *L'Abandon à la Providence*; Lallemont, S.J., Rev., *La Doctrine Spirituelle.*

is powerless in certain circumstances to keep us from falling into certain defects and cause us to will what is good? (Suarez, as we shall see, had explicitly to admit this very proposition.) How could we hope to reach heaven if God could give us only an indifferent grace and if we had to make it efficacious by the effort of our own poor and inconstant will: Is not our salvation incomparably more assured in God's hands than in our own? " [3]

Now in deciding which spirit we shall follow it is most help-

[3] Garrigou-Lagrange, *op. cit.*, pp. 500-501. The difference between the two spirits—the spirit of Congruism and that of Thomism—can be illustrated by considering the words of a " religious soul " quoted by Father Garrigou. " Formerly I believed . . . that God gave us more graces and predestined us, because He saw in advance, in His infinite foreknowledge, that we would correspond with His graces; but after I have read St. Thomas, it seems to me that this way of thinking . . . takes away something from God, so as to make us rely more on ourselves, and that it is better to abandon ourselves to Him . . . assured that He does not wish to damn anyone. How good it is to profit by these questions, so agonizing and troublesome, so that we may trust more in Him who can do all things, who loves us and whom we wish to love! . . . by the prayer that He will cause us to utter, He will give us the grace that is efficacious, fidelity, love, perseverance.

" . . . In order to grant me these graces of peace of mind and abandonment to His will, He waited until I fully realized that everything, everything comes from Him. Formerly I relied too much on myself . . . now I rely on His divine strength. He is my strength and my salvation." (cf. p. 502)

On the other hand, we can with Father Del Prado (cf. *De Gratia et Libero Arbitrio*, Pars IIIa, p. 149) deduce what the attitude in prayer of a Congruist should be if his doctrine were unaffected: " Lord, I give thee thanks, because without Thy premotion I determined and I chose to observe Thy precepts; I give Thee thanks, Lord, because I moved my free will, which Thou canst not intrinsically move or change, to do what is right and good. I give Thee thanks because when Thou didst stand at the door of my heart, as at the door of the hearts of other men, I, in the final decision, physically alone and without Thy help, did open the door of my heart to Thee . . . others did not. In the business of saving my soul, Lord, not everything is from Thee—but for the part that is, I thank Thee. I thank Thee for this that while other men, with no greater temptation than I had, fell, I have persevered through my own determination (which Thou didst not physically prepare) in using the help which Thou didst have ready if I wanted it. I thank Thee, Lord, because Thou art doing Thy part to save me, and I, of course, am doing my no less essential part, which Thou canst not do." Listen then to some of the Collects of the Missal " That God may compel our rebellious wills," " That He may give us a good will "; " We do not put our trust in anything that we do of ourselves "; " Keep thy family . . . it leans solely on the help of thy grace "; " Make them seek only that which is pleasing to thee."

ful to have a very exact knowledge of the nature of grace; for if that be misunderstood, then one's whole life is at least maladjusted to the realities of Christian living. It is imperative that the driver of a car know what the clutch is for, and the gearshift, the brake, the gas; if he does not, he simply invites disaster. So with the human soul. If man does not know his own role in his life with God, and God's own role in that same life he, too, may be headed for disaster. Only in knowing, as accurately and as fully as is possible to each of us, the nature and the workings of God's grace can we hope properly to adjust ourselves to it and to live by it, in the way that we should. In general, therefore, sincere attempts to come to a knowledge of the nature of God's grace are useful and in the highest sense, practical.

Over and above that, however, this approach of ours in particular seems to have value. We intend quite simply to examine Suarezian Congruism and to analyze it in terms of its fundamental propositions and all that they involve. Now the very fact of the protracted disputes on this matter of human freedom and God's grace is proof that any attempt to reach agreement on the disputed positions as though they were isolated teachings must fail. Centuries of discussion have brought the disputants no closer together. Only an approach, then, which seeks the ultimate roots of each system and makes possible the evaluation of those hidden presuppositions can hope to contribute, perhaps, to eventual agreement. What is needed is a clear and reasoned affirmation and reaffirmation of what those roots are, plus a realization that neither system can properly be known or evaluated except in the light of its respective bases. He who accepts and defends one or the other system must wholeheartedly accept its foundation. This proposed study of ours aims, therefore, to lead to a better understanding of the Suarezian position by following it, step by step, to its very origins; once they are explicated, Suarezianism, as an integral system, can be evaluated—for any teaching on freedom and the divine motion can be understood only in light of its metaphysical principles.

The suspicions, therefore, that such a study is useless, wasteful or harmful are easily put to rest. It cannot be useless for while it is certainly more important to have grace than to know intimately its nature, still such knowledge as we can acquire is highly important, particularly in order that we be able to judge our relationship with God. Nor is such an endeavor a waste of time; the very fact that most learned men have, for a long time, disputed this very matter indicates that better minds than ours have considered it at least possible to reach agreement. There is mystery, assuredly, in the workings of God's grace in the lives of men, but not everything about the mysteries is beyond our understanding, for mysteries of our faith are revealed by God as great sources of enlightenment, not as occasions for ceasing to reason. Nor, finally, is such an undertaking harmful even though similar undertakings have, in the past, sometimes provoked dispute, for in this matter it is only through discussion that a resolution of the questions involved can be hoped for. If we perpetually impose on ourselves a voluntary silence in these matters concord in them can never be attained. The very silence rather than honest and calm discussion would bring a perpetuating of disagreement on a vital issue.

The reasonableness, therefore, of discussing these much-discussed questions is apparent. Our aim in this particular discussion is extremely simple. We are deeply convinced—and the history of the long discussions between Congruists and Thomists no less than our own study of the two positions bears us out—that the Congruist and the Thomistic teachings on human freedom and God's causality of a created free act cannot, as we have indicated, be considered in themselves alone nor discussed as though they were independent or isolated teachings. Men who, over a long period of time, disagree over and discuss some problem commonly come at the end to reach at least some points of mutual agreement—but today after three hundred years of discussion Suarezians and Thomists are no closer to agreement than they were at the beginning, for in this matter there is hardly a single point—outside, of course, those truths which are of faith—upon which the two groups

agree. Evidently, then, it is imprudent to attempt to solve the problem by considering only the points immediately under discussion. Since there are no common points of agreement (save always the truths of faith) the real heart of the disagreement must lie deeper—and our aim here is to uncover those more hidden, but truly radical points of conflict. To really understand even the conflict about man's freedom and God's movement of human free acts we must know the roots of that conflict in order to determine whether even in its roots there is any basis for hoping to resolve the differences. What we intend, therefore, in this paper is by an impartial and objective study of Suarez' own works to dig out the rock-bottom bases of his teachings in this matter and, then, reflectively, to show the discovered bases are, in fact, the supports which give character and weight to each of the various doctrinal points developed by Suarez. The answer to the further question—Is agreement possible between Suarezians and Thomists with respect to these bases?—will be amply evident perhaps from their very enunciation, and certainly so from even a very brief consideration of their implications.

The manner of procedure is immediately indicated by the nature of our task. Since we are primarily interested in Suarez' teaching on human freedom and God's motion we give first a reasonably detailed exposition of that teaching, an exposition which is not an interpretation but Suarez' own doctrine expressed as far as is possible in his own terms. In order to make easy verification of the fidelity of our exposition we give very frequent references to Suarez' works and, often enough, quote the Latin text of Suarez. Yet any Thomist who, for the first time, meets so full an explanation of the teachings of Suarez is certain to finish with a sense of not having seen a complete picture. He will know what Suarez taught about the nature of human freedom and its relation to God's motion; he will see, granted Suarez' premises, the logic of that teaching, but he must still have the sense that something about those premises has escaped him. Even granted, that, in order to save human liberty, Suarez, because of his peculiar system,

had to teach that the human will needs no distinct premotion by God because such promotion would destroy liberty as he conceived it, the Thomist is still puzzled as to how Suarez *could* teach that. He senses that Suarez is supposing something which the Thomist does not understand about the very nature of free will, not only in so far as it is an appetite, but also in so far as it is a potency. There is nothing to do then but to seek to answer the question, "How did Suarez conceive this power which is the will? And how did he conceive its relation to its own act?" To answer we must know what Suarez thought of potency and act in general, and so in the second section of the exposition we shall review the Suarezian teaching on potency and act. Since Suarez himself does not set out to give his whole doctrine on this highly metaphysical point in any one tract, one must collect from various parts of his works (particularly from the *Disputationes Metaphysicae*) his discussions of potency and act in several diverse orders. We do not, therefore, arbitrarily reduce all of Suarez' teaching to a few propositions expressed in our own terms, but rather we expose that teaching in each of the major fields in which the doctrine on potency and act is fundamental. Here again as in the first part, our attempt is to allow Suarez to speak for himself; so, without reading anything into his teaching, we give plentiful references to, and adequate quotations of, Suarez' very words.

Given, then, in Part I the necessary knowledge of Suarez, we proceed to the second major part, the criticism. Since we wish to see what influence his teaching on potency and act has on Suarez' notions of liberty, logic clearly demands that the former teaching be analyzed and criticized first, and any fundamental and unifying principle which may be in it, exposed; and the working out of that principle indicated in each of the various orders in which Suarez takes up the consideration of potency and act. In the second section of the second part, enlightened now by the knowledge we should have of Suarez' basic notion of potency we show, first the working out of that notion in his whole teaching about free acts, and secondly the factor which

made the application of the metaphysical notion of potency so easy and inevitable here—which factor is the Suarezian concept of the nature of man's free appetite, as appetite. Thus the real bases of Suarezian Congruism are explicated and that by appealing to the teachings of Suarez himself; at the same time in our disposition of the matter, the order of discovery is, in general at least, preserved, even though in particular (in the second part especially) we frequently resort to the order of discipline in order to bring home the basic unity in Suarez. Even in the first part we have not hesitated to rearrange and try to systematize some of the teachings which are found in various parts of Suarez' works. The brief outline of our procedure therefore is this:

Part I: The Exposition (of Suarez' teaching):

Section I: The Suarezian teaching about human freedom

Section II: The Metaphysical Background (of this teaching)

Part II: The Criticism:

Section I: The criticism of the metaphysical background

Section II: Criticism of the Suarezian teaching on human liberty.

A more detailed outline of each section to indicate the various points to be studied will accompany the individual sections.

So much, then, for the justification, the purpose, and the procedure of our undertaking. A brief resumé in the beginning, of the conclusions to which this undertaking has led us, and of which it shall be the premises and the defense, will be helpful in understanding the orientation of the whole work. The conclusion can be briefly stated thus: Through the centuries Thomists and Suarezians have not agreed on questions relative to man's free acts and God's causality of those free acts because they lack, in the natural order, a common starting point in this matter; their disagreement on these points is only a part and a symptom of a far more fundamental disagreement, so that their divergent teachings on created liberty and God's motion of it shall not, except, of course, in the case of a final decision

in the matter by the Church, be reconciled so long as the more basic disagreement persists.

Note that we say that the two schools lack a common starting point "in the natural order." Can differences in that order, then, cause differences in the higher, supernatural order (for differences about the nature of grace are clearly differences about a supernatural reality)? They can; for it is evident that our knowledge of supernatural things is conditioned by our knowledge of the order of nature, for the things we know first and best are natural realities; in this life we know supernatural things only by analogy with the natural. The things which God so lovingly chose to reveal to us have come into our knowledge through the medium of human words; and human words primarily and most properly signify the natural things which first fall within human experience. When, therefore, those same words are employed to signify realities of a higher order, they can do so only analogously; the things of that higher order are not, absolutely speaking, the same as the things primarily signified by these words in question, but only according to a certain proportion. What, then, if two men, or two groups of men, disagree on the nature of the things *primarily* signified by certain human words? Will not disagreement about supernatural things which those same words are used to signify only by analogy to the natural, most easily follow? Just as certainly as an accurate human knowledge of nature (philosophy) is a good basis for an accurate human science of supernature (theology), so disagreement about the things known in the natural order can be a firm basis for disagreement about supernatural things known through revelation. Such disagreements, whenever found, are likely to be reconciled only by a searching investigation which points the way to eventual agreement in the natural order, as the condition for agreement on the more divine plane.

Granted the fact, then, that disagreement in the lower order can lead to disagreement in the higher order, are Thomists and Suarezians in disagreement about natural realities? That they are and have been is an accepted fact; it is our contention

that that disagreement is so deep, so ultimate, that there are no more radical points of human science, save the principle of contradition, agreed to by both sides in the light of which they can come to mutual agreement on the issue now disputed. It is in that sense that we say the two schools lack, in the natural order, a common starting point—that, therefore, the dispute cannot be resolved by natural science now accepted by both sides. Fundamentally what is in dispute is not whether some grace be intrinsically efficacious, and whether such grace physically determines the created will to act freely, but rather (1) the nature of man's free faculty as *free* (i. e. the nature of created liberty itself) and (2) the nature of man's free faculty as *faculty* (i. e. the very nature of potency.) The first question is ultimate in its order; the second is ultimate in the whole scientific metaphysical order, (since there is nothing more basic in that order than the first principles of which we have, not science, but the habit of *intellectus*. Suarezianism—and this is the whole burden of our study—can be reduced to, and summarized in, two propositions, each so basic that it can be resolved to no more ultimate proposition, and to the two propositions Thomists shall never agree. The first bases of Suarezian Congruism we insist are these two propositions: 1) reason does not enter in as a *per se* cause of a free human act; the Scotistic divorce of intellect from will was actually accepted by Suarez; 2) potency and act are not really distinct principles of created being, for one reality which is actual can also be, in its very actuality, its own intrinsic limitation of actuality; conversely one reality can be of itself potential, yet virtually and eminently contain its own actuality.

The first proposition, as we very well know, can be instantly attacked by an appeal to Suarez' own words. We are quite aware that he derives the existence of liberty in man precisely from man's intellectual nature; we are aware that he verbally rejected Scotus' divorce of will and intellect. None the less we maintain, and shall show, that in his own thinking Suarez was a convinced, if unconscious, voluntarist; that he never even conceived the implications of the fact that the existence of freedom in man must be derived from the existence of intellect

in man; that he never understood the Thomists' teaching on the interdependence of the two faculties, but explicitly asserted, on the other hand, the unique and independent primacy of the will in its own order. Suarez conceived himself as a Thomistic intellectualist, but he conceived man's free power as a Scotistic voluntarist would conceive it. He openly maintained that the will of man can act without regulation by reason, that it can, for no reason other than its very freedom, choose one of several equally good objects, or even the lesser of several proposed goods.

Along with Suarez' misconception of the human will as free is a most interesting concept of it as potency, the concept that as a potency it can virtually and eminently contain its own act, its own determination, so that without premotion or predetermination by God it can reduce itself to act; as potency it has within itself its own actuality. That proposition is like a theme stated and restated in the works of Suarez. Necessarily it rests upon a metaphysical judgment about potency and act as such; that judgment is accurately stated in the second of the two propositions we have already indicated as basic in Suarez' doctrine. That Suarez was explicitly, and consciously, convinced of that proposition cannot be doubted; it is at the root of his teachings on potency and act in practically every distinct phase of the question he considered, as we shall show.

But what of these two judgments; are they acceptable or not? With respect to the first there is no difficulty, for Suarez himself did not consciouly wish to embrace it, but wished rather to stick by Thomistic intellectualism. Even in his eyes the Scotistic voluntarism which he accepted unawares was a discredited thing. But the second principle he consciously enunciated. Is it philosophically (or theologically) tenable? Consider its implications!

Act, of itself, admittedly names perfection, either perfection in a certain order, or absolutely unlimited perfection. Wisdom, for example, denotes the perfection of knowing things in their cause. Limitation denotes a certain exclusion of perfection, for it prohibits an act from including more perfection than that to

which the limits restrict it. The limitations on the wisdom of St. Thomas, for example, prevented his knowing things in their causes as well as the Archangel Gabriel does. Suarez maintained that this act, wisdom, can also be its own intrinsic limitations. So it must follow that in St. Thomas the wisdom he had is, in nature, identical with the element which limited his wisdom and prevented its being identical with that of Gabriel (and prevented, of course, its being identical with *any* other wisdom). But if these limits are identical in reality with the widsom, then wisdom is, by its very nature, *this* wisdom of St. Thomas, and it is false to speak of another wisdom, of Gabriel for example. If in nature wisdom is identified with certain limits, then by definition wisdom *is* those limits, and what has different limits has a different nature; therefore is not wisdom. Thus by its very nature all wisdom would be St. Thomas' wisdom. There would be no longer many diverse degrees of wisdom, but only one wisdom. Thus the analogous concept of wisdom would be destroyed to be replaced by an absolute univocal. The distinction between the Uncreated Wisdom of God, the created wisdom of the Man Christ, the wisdom of each angel, and the wisdom of men, all these vanish. But ought these distinctions to vanish? Shall we say that the Wisdom which is God is the weak and halting obscurity called human wisdom? Clearly the teaching of Suarez destroys any possibility of analogy.

Beyond this, even the very possibility of any universal predication whatsoever is taken away by Suarez, along with the real foundation for such predication. A universal is predicated of several singulars when a form (or act), while retaining the same definition, is found to exist in nature in several things which are yet somehow distinct one from another; the act which is human nature, for example, retaining the same definition—rational animality—does exist in an uncounted number of men. Now if an act be not really distinct from, but rather identical with, that which limits it, it follows that that element in nature which makes human nature in any individual—say in St. Dominic—to be limited to that individual, i. e. makes it to be

his human nature, that limiting element clearly is to be identified with human nature. Hence human nature, really, essentially, includes whatever it was that individualized St. Dominic and made him distinct from all other men; the only human nature there is, it would follow, is St. Dominic. Of him we could say, " He is all human nature "; and of no one else could we say, " He is a human "; for given the fact that as individual St. Dominic differs from other individuals (if he did not so differ they would not be *other*), and then supposing, as Suarez supposed, that in the real world that which limits an act to be this individual is really identical with the act, it follows that the act *is* this given individual and none other. Hence there are not many men: for what we call the human nature in many men has a differentiation in each and hence (on the supposition that differentiation *is* the nature) a different definition. There is, then, no such thing as a common nature found in many individuals; and to call Scotus, Suarez, Leibnitz, and James men is to call by one name many really different things. Accepting Suarez' position and then concluding from it, one ought logically to end up in purest Nominalism—and Nominalism is refuted by every day experience. Lest we seem through some intellectual chicanery to be twisting Suarez' position to conclusions unrelated to it, we must point out that traces of both these conclusions we have drawn are to be found in Suarez himself. The first, the tending toward univocity in analogates is to be found in his treatment of being in general in which he maintains that the formal concept of being is one; and so sure was he of the unity of being (though being among Scholastics has always been considered a classic example of analogy) that he says that " everything we have said of the unity of the concept of being seems far more clear and certain than that being is analogous " and " the unity of the concept is not rightly to be denied for the sake of defending the analogy. If one must be denied rather the analogy (which is uncertain) is to be denied than the unity of the concept which seems to be demonstrated." [4] At the very

[4] *Disputationes Metaphysicae,* disputatio II, sectio 2, n. 3, 4.

beginning of his metaphysical speculation, then, the direction toward which his principles leaned is clear.

With regard to the second implication we have indicated—namely, removal of all universality—Suarez, writing about individual unity, maintained that an individual as such adds nothing really distinct from the specific nature; but what it adds to the common nature is only rationally distinct from that common nature.[5] Since things which are not really distinct are really the same, the implication seems hardly far-fetched.

What is fundamentally wrong with this principle which destroys both analogy and all universality? The fact is that these consequences are merely symptoms; what is basically involved here is the very principle of contradiction, for the Suarezian formula is opposed to that first principle of all human thought. From the position of Suarez it follows that one and the same reality is, at one time, and in one order, both limited and unlimited, finite and infinite. Admittedly St. Dominic is not the only man; there are and presumably shall be millions of men other than St. Dominic. Suarez would admit, then, that St. Dominic does not totally exhaust the totality of human nature; rather his humanity is a *limited* human nature other than which there are many human natures. But if it be also true, as Suarez taught, that act can be identical with its own limits (or more proximately for this example, that an individual adds nothing really distinct from a specific nature), then there is nothing distinct from the act which is human nature which can receive and multiply it, nothing in which it can be pluralized, for if we try to imagine this reality which is the combined act-limits as pluralized, we find it impossible; if act is the same and its limits the same there is nothing in which the attempted plural members can differ, but they are precisely alike in every way; hence there is really no plurality at all, but only unity. Thus multiplication of an act is impossible; any act that actually is is the totality of that act which lacks nothing that that act could have. It is, then, that act to an unlimited

[5] *Ibid.*, disp. V, sect. 2, n. 9, 16.

degree; it is, if multiple, a limited infinity; it is multiplied though not multiple; it is both totally this act and partially the same act—and that follows inevitably from the Suarezian position. Other arguments, too, can be urged against Suarez at this point, but there shall be opportunity enough in subsequent pages to examine them.

The metaphysical principle, in any case, upon which the whole structure of Suarez' Congruism is constructed is both opposed to the principle of contradiction and destructive of all analogy and universality. We have yet to show, of course, that that principle and the Suarez-discredited divorce of will from intellect are the two pillars of his Congruism.

Which of these two principles was, in historical fact, prior in the mind of Suarez we are not in a position to know; but their mutual causality upon each other in the generation of his system seems quite apparent. Suarez conceived human freedom subjectively rather than objectively, as his very definition of it indicates; he defined this quality of an operative faculty not in light of the objects with respect to which the faculty operate and from which, therefore, all its characteristics (including liberty) are derived, but rather he defined it in light of an indifference in the faculty itself, a subjective consideration which ignored the genesis of that indifference. Considering liberty, therefore, apart from its object and the faculty (namely, the intellect) which presents that object, Suarez, faced with the Thomistic doctrine on physical premotion and efficacious grace, had to conclude that such efficacy would destroy freedom and was, therefore, impossible. The Thomist can assert premotion and safeguard liberty, for he sees that the free faculty premoved is of such a nature that it is metaphysically impossible that it even be necessitated with respect to an object known not to be a perfect good. Why? Because election, the proper act of the free power, is for the Thomist substantially an act of will but formally an act of reason, and through reason man has a norm (the universal good). Man can always compare any particular good, and even the human act itself bearing on that good, with the universal norm, and seeing object and act

as partial things inadequate to his appetite for universal good, cannot be necessitated with regard to them, for only those volitional acts of men are necessary which regard universal good. From the very fact that the act of the *liberum arbitrium* is formally an *arbitrium*, i. e. a judgment, it is metaphysically impossible that that act even be necessary with regard to a particular thing known to be such.

Suarez could not, after divorcing will from intellect, safeguard its freedom from the intellectual side of the volitional act, since it had none, entering in as a *per se* cause, in his analysis. Yet the will is free, as both faith and reason indicate. Since Suarez could no longer root that freedom in the will as *will*, i. e. as intellectual, he rooted it in the will as *potency*, for he had ready to hand (or else elaborated—we confess we do not know which) the doctrine that potency can be a self-actuating thing; the volitional potency thus becomes free even of premotion, free even to this extent that it brings about without God's predetermination its own self-determination. Necessarily, then, the Thomistic doctrine about God's causality of our free acts was thrown overboard. Thus, while Suarez' general concept of potency made it *possible* for him to teach what he does about God's causality of our free acts, his subjective conception and definition of liberty made it *necessary* that he teach that in order to safeguard freedom. Once he had cut off from himself the safeguarding of freedom by an appeal to its intellectual side, he was forced to safeguard it by an appeal to the self-actuating character of the very potency—something which he could do in light of his general doctrine on potency.

It remains, then, to make good the claims we have here made. With a single hope that we may thereby be serving the God of all science, we shall undertake to do so in subsequent sections of this study.

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(*To be continued*)

MYSTICI CORPORIS AND THE SOUL OF THE CHURCH

THE most casual acquaintance with the history of theological discussions will justify taking the greatest care in the precision and clarity of terminology. *Hypostasis, Filioque, homoiousios* leap immediately to mind. What was perhaps at first only a material error, the choice of a word, was fanned by injured pride into formal error, the sins of heresy and schism, violence, and the spiritual ruin of many. "What's in a name?" indeed—at times, more than one realizes at the moment.

Relatively speaking, words are not, of course, as important as the ideas they are intended to convey, but since we lack angelic means of communication, we must continue to express our ideas by means of words, and to express our ideas clearly and precisely, we must choose our words for their clarity and precision. In oral communication, when misunderstanding or obscurity arises, it can be immediately adjusted by the living voice; but the printed word cannot interpret itself, it leaves its writer at the mercy of his reader's intelligence and good will. The complicated arrangement of molecules of ink which is the printed word is designed to effect the transfer of exactly the same idea from the mind of the writer to the mind of the reader; if the result is a different idea, then we must scrutinize the writer who chose the word, the reader, and indeed, sometimes the word itself. And if a reader should disagree with a writer, there is always the possibility that he disagrees, not with the ideas of the writer, but with what he thinks are the ideas of the writer; when a man's choice of words is censured, it is always on the premise that the critic has penetrated the thought to be conveyed in spite of the questionable language.

The Encyclical letter of Our Holy Father Pius XII on the Church and the Mystical Body [1] would attract the most studi-

[1] *Mystici Corporis Christi*, in *AAS* XXXV (1943), pp. 193-248.

ous attention of all Christians for either of the two reasons which combine to make it one of the most important events of lasting significance in our generation, its subject matter—Christ living in His Church, and its author—the colossus who acts as Christ's Vicar on earth. Small wonder that it has been studied with care and diligence, its admonitions received with loving reverence, its instructions pondered. Only the most temerarious could dare to controvert its express teachings; only the grossest ignorance could excuse flouting its wise and salutary instructions.

But unfortunately the voice of even Peter must mute its ravishing tones and reach the flock through printed words—often in another language—doubling the risk of losing in the transfer the precious thought of Christ's own vicar. If then discussion of the encyclical should arise, it would be to clarify our understanding of it, to penetrate the meaning of the words, to compare our harvest with the fruits gathered by others from it. If we should find something new, we might examine whether it is really so, and to all, or only to us. If we should find something that contradicts what is already widely accepted, we might examine whether the contradiction is real or only apparent due to our lack of perspicacity. If we should find something that catalyzes a whole mass of material dear to our heart into a scintillating chain of conclusions, we might pause a moment lest in the fervor of our haste, we put *our* conclusion into the mouth of Peter.

Something of the sort has been happening since the appearance of the Encyclical. Not only has it been hailed a reorientation and reorganization of the whole of theology.[2] It is credited with restricting the membership of the Mystical Body and discrediting at least one outstanding book on the subject.[3] And what concerns us most closely here, it is supposed to have abolished the distinction between the body and the soul of the Church.[4]

[2] J. Bluett, S. J., "Theological Significance of the Encylical *Mystici Corporis*," in *Proceedings of Foundation Meeting, Catholic Theological Society*, pp. 47, 60.

[3] J. Bluett, S. J., *Theological Studies*, VIII (1947), p. 340; Francis Connell, C. SS. R., *American Ecclesiastical Review* CXV (1946), p. 62.

[4] J. C. Fenton, "The Use of the Terms Body and Soul with Reference to the

And although this effect is not universal, rumors of such speculation among the theologians are disturbing some of the little ones of the flock who, more charitable perhaps, judge these matters in the light of their infused wisdom instead of the acquired wisdom of the theologians, and are concerned over the salvation of the "other sheep." [5] So it is not without profit and hope of more exact understanding to consider again what Pope Pius XII teaches about the membership of the Church, and the incorporation of its members into the Mystical Body. It is only reasonable to defer our judgment of the novelty of the Pope's teaching until we have established, as best we can, what it really is.

With regard to the membership of the Mystical Body, it has been stated that it "contradicts papal teaching" to assert, "Neither can one say that the Mystical Body of Christ is limited in an actual sense, to those who belong *visibly* to the Church" [italics mine.] The explicit papal declaration, which it is said to contradict, reads, "Only those are really to be included as members of the Church who have been baptized and profess the true faith, and who have not unhappily withdrawn from Body-unity or for grave faults been excluded by legitimate authority. . . ." [6] Since the contradiction is not obvious, at least at first glance, we must assume that it lies between the implications or inferences of these statements. The first says the Mystical Body is not limited to those who "belong visibly to the Church." Incidentally, this is a much more exact phrase than the commoner "belong to the visible Church," because the visibility of the Church is quite different from the visibility of membership, and because one might possibly belong "invisibly" to a visible organization, e. g. the Communist Party. The Pope writes that only the baptized belong to the Church, and since, he quotes with approval the words of St.

Catholic Church," *American Ecclesiastical Review* CX (1944), p. 48; "Extra Ecclesiam Nulla Salus," *Ibid.*, p. 300.

[5] Cf. *Homiletic and Pastoral Review* XLVIII (1947), p. 134.

[6] In Ecclesiae autem membris reapse ii soli annumerandi sunt, qui regenerationis lavacrum receperunt veramque fidem profitentur, neque a Corporis compage semet ipsos [sic] misere separarunt vel ob gravissima admissa a legitima auctoritate sejuncti sunt. *Mystici Corporis Christi*, p. 202.

Paul, the Church is the Mystical Body of Christ, the conclusion is drawn that the Pope teaches that only the baptized belong to the Mystical Body, or, in slightly different words, the Mystical Body is limited to those who belong to the Church, i. e., the baptized. But this is fallacious.

In order to support this conclusion, " Church " in the minor would have to be taken in the same sense as in the major where it is obviously the " visible Church " for otherwise we might have four terms, and besides, and this is the crux of the problem, " visible Church " and Mystical Body must be simply convertible, or, loosely speaking, equivalent. Hence the idea has arisen that as a result of the encyclical the distinction between belonging to the body of the Church and to the soul of the Church, and belonging visibly and invisibly is abolished. Great care, then, is indicated in determining in what sense the minor is to be understood and applied.

If a schoolboy were to present such an argument as this: " Only rational men are members of (belong to) the human race. But, the human race are animals, therefore, only rational men are animals," we would detect the flaw immediately. And yet both premises are true.

In the same way, both premises are clearly papal teaching, but the conclusion, the limitation of the mystical body to *only* the baptized, i. e., the visible church, does not follow. At least it does not follow from these alone. It is true that all the members of the visible Church are members of the Mystical Body, but what of the converse, are they the only members, and does the Pope say anything about it? It is true that all men are animals, but it is not equally true that all animals are men. Can we say that the Pope teaches that all members of the Mystical Body (and not merely some members, even the greater part) are members of the visible Church, because he teaches that the Church is the Mystical Body? The answer is obvious even to one unacquainted with the elements of logic.

Nor would the result be any different if we inverted the minor to read, " the Mystical Body is the Church." We would have to be certain, as before, that the Mystical Body is the visible Church and that the two are coextensive, or what is

more to the point, that the Holy Father explicitly declares them so.

Hence the case for the contradiction is somewhat weak. What now of the actual teaching of the Encyclical? Most people are suspicious of logic and its subtleties anyway, and we have agreed that the premises are true. But first, the whole context:

> Only those are really to be included as members of the Church who have been baptized and profess the true faith and who have not unhappily withdrawn from Body-unity or for grave faults been excluded by legitimate authority. "For in one Spirit," says the Apostle, "were we all baptized in one Body, whether Jews or Gentiles, whether bond or free." (I Cor. 12, 13.) And therefore in the true Christian community there is only one Body, one Spirit, one Lord and one Baptism, so there can be only one faith. (Eph. 4, 5.) And so if a man refuse to hear the Church, let him be considered—so the Lord commands—as a heathen and a publican. It follows that those who are divided in faith or government cannot be living in one Body such as this, and cannot be living the life of its one divine Spirit.[7]

The Holy Father first enumerates certain qualifications that must be filled by a member of the Church. He must be baptized, since it was declared for the Armenians,[8] among other places, that by baptism we become members of Christ and of the *body* of the Church; and a member must not be separated by the crimes of heresy, schism, or apostasy, or by the ban of excommunication. The Pope concludes that those who are "divided in faith or government" are not members of the Mystical Body. There is nothing new or striking in this; it is commonly held by theologians.[9]

However, all theologians insist that this separation from the Church must be voluntary, deliberate, intentional, culpable. If the conclusion is traditional, may not the distinctions to be made be adopted from tradition too? "So if a man *refuse* . . ."

[7] *Mystici Coporis Christi*, p. 202 (translation by National Catholic Welfare Conference, Washington, 1943, par. 22).

[8] Denziger, *Enchiridion Symbolorum*, n. 696; cf. n. 895, also *Codex Juris Canonici*, c. 87.

[9] Cf. M. J. Congar, O.P., "The Idea of the Church," The Thomist I (1939), p. 331.

seems to indicate a deliberate act; refusal is more intentional than mere omission or failure. Hence there are grounds for assuming that the Holy Father meant that those who are deliberately, or voluntarily, or culpably divided in faith or government are cut off by their own will from the life of the Mystical Body. What of those, however, who are actually divided from the visible Church but through no fault of their own, through no deliberate act of refusal, who because they have not undergone the rite of baptism are not—in the words of Eugene IV—of the body of the Church? [10] It is possible in any way for them to live the life of the divine Spirit? Theologians have commonly held that it is, and they explain their teaching by a metaphor that goes back to the time of Origen. Non-Catholics who are in the state of grace are said to be living in the soul of the Church. They are of the Church because they are sharers in the life of grace, they are not of its body because they do not fulfill the conditions enumerated; they are only ordained to membership in the body, "unsuspectingly . . . in desire and resolution. . . ." [11]

There does not seem to be any indication in these words of the Holy Father that such a usage is to be discontinued. It is one thing to say that those who have deliberately cut themselves off from the Church are thereby cut off from the Mystical Body; it is quite another to say that those who are outside the Church through no fault of their own and whose souls are the dwelling places of the Holy Ghost are cut off from the Mystical Christ through Whose Sacred Humanity all graces come to all men. The first is Papal teaching; the second would be worthy of censure, because of the slight it would cast on the universality of the Redemption and the sanctifying activities of the Holy Ghost.

When he says that all the members of the Church by baptism are members of the Mystical Body, the Pope assumes that the justification for such a simple statement will be clear to those of his readers with a theological background. One of the effects of sanctifying grace is incorporation into Christ, ". . .

[10] Denziger, n. 696.

[11] *Mystici Corporis Christi*, p. 242 (N. C. W. C. translation, par. 100).

and because through grace, man is incorporated into Christ and united to His members . . . "; [12] the ordinary channel of grace is the worthy reception of the sacraments, and particularly the sacrament of baptism. On the other hand, one becomes a member of the Church, in a legal sense, through baptism.[13] The conclusion is obvious.

But to justify the statement that only the baptized are members of the Mystical Body, we would need different premises. And if a conclusion be properly and strictly drawn from its premises, the negation of the conclusion involves the negation of the premises in which it is virtually contained. Now in order to get the idea of exclusiveness, as contained in the word " only " into the conclusion, we must begin: the only way to receive grace, i. e., incorporation into Christ, is through the sacrament of baptism. If this be not true, then the conclusion that only the baptized are incorporated into Christ, does not follow. And, in view of the fact that Quesnel's proposition " No grace is granted outside the Church " (*Extra ecclesiam nulla conceditur gratia*) has been condemned,[14] as well as other propositions of similar tenor, it would be dangerous to try to defend such a restriction in the distribution of grace. " For I tell you that God is able of these stones to raise up children to Abraham." [15]

Thus the teaching of Pius XII on the actual membership of the Church and the Mystical Body and its restriction to those in communion with the Holy See does not contradict the statement that the Mystical Body is not limited to those who belong visibly to the Church. Nor does a passage quoted apart from its context abolish the traditional distinction between belonging visibly to the Church's body, and invisibly to its soul.

What of the declaration of Pius XI that such a distinction is inappropriate and absurd? Again the context and the purpose

[12] *Decretum Pro Armenis*, Denziger, n. 698.

[13] Baptismate homo constituitur in Ecclesia Christi persona . . . nisi . . . obstet obex . . . , *Codex Juris Canonici*, c. 87.

[14] Constitutio dogmatica, *Unigenitus*, Clement XI, in Denziger, n. 1379.

[15] *Matthew*, iii, 9.

of the Encyclical give us a clue to the sense. Pius XI condemned in strong and vigorous language the Panchristian movement which sought to unite all churches in a world federation. And he concludes,

> And so, Venerable Brethren, it is clear why this Apostolic See has never allowed its representatives to attend gatherings of non-catholics, for the union of christians may be fostered in no other way than by promoting the return of the dissidents to the one true Church of Christ. . . . For since the mystical Body of Christ, namely the Church, is one, " being compacted and fitly joined together " after the fashion of his physical body, *you would foolishly and stupidly* say that a mystical body can consist of dispersed and scattered members: whoever therefore is not joined with Him is neither His member nor one with the head (Who Is) Christ.[16]

The non-catholics who are the dispersed and scattered and therefore unassimilable members are so deliberately and voluntarily. The Pope says nothing about those who are in good faith and inculpably beyond the sound of his voice, or rather he makes the incidental, but for us very significant, observation that whoever is not joined with Him is not His member. Could that imply that whoever is joined with Him, of course by sanctifying grace, or even by *fides informis*, is His member? The tradition for such a position is venerable enough to be respectable.

The most effective citation to support the contention of those who deplore the expression " the soul of the Church " is this, " We deplore and condemn the pernicious error of those who conjure up from their fancies an imaginary Church, a kind of Society that finds its origin and growth in charity, to which they somewhat contemptuously oppose another, which they call juridical. But this distinction which they introduce is base-

[16]Itaque, Venerabiles Fratres, planum est cur haec Apostolica Sedes numquam siverit suos acatholicorum interesse conventibus; christianorum enim conjunctionem haud aliter foveri licet, quam fovendo dissidentium ad unam veram Christi Ecclesiam reditu. . . . Cum enim corpus Christi mysticum, sc. Ecclesia, unum sit . . . compactum et connexum . . . corporis ejus instar, inepte stulteque dixeris mysticum corpus ex membris disjunctis dissipatisque constare posse: quisquis igitur cum eo non copulatur, nec ejus est membrum nec cum capite Christo cohaeret. Encyclical, *Mortalium Animos*, in *AAS* XX (1928), p. 15.

less." [17] This forthright condemnation is taken to apply to the explanation found in nearly all treatises on the salvation of infidels and those outside the Church, by which the axiom, *extra ecclesiam nulla salus* is reconciled with the fact that some are saved outside the Church. That they are saved shows that they belonged to the Church, that they were infidels leaves them outside the Church, hence they are said to belong to the soul, and not to the body, of the Church.

It is quite possible that the Holy Father was condemning, not a wide-spread Catholic notion, but a wide-spread Protestant error, the invisible Church of Martin Luther and the Reformers, the spiritual church of the Fraticelli, of Wycliffe and the Hussites. As we have mentioned before, the expression " invisible Church " is inexact and misleading and we gladly relinquish it to those who by its use can conceal their rejection of the true Church which Christ founded. The Church is one, not two- or three-fold. It is, by the very nature of its purpose, visible to all men, and is ruled by a visible head as the Vicar of its invisible head, Christ its founder. But as Billot pointed out,[18] " the visibility of the Church belongs to the body in general; not to each of its members taken singly. . . . " It is not, therefore, contrary to Catholic teaching, particularly that of the Pre-Tridentine theologians whose thought had not been focused on the subterfuges of the Reformers, to hold that men can be of the Church, without partaking of her visible communion. To put this idea concretely and to pay homage to the Holy Spirit who by appropriation is the Sanctifier, the Principle of all graces, the Breath of Divine Life, the Soul of the Church, theologians said that such, animated as they were by the Holy Spirit, were of the soul of the Church. That doctrine remains intact. It is the Spiritual Church, the Invisible Church, the Soul of the Church in the Protestant sense that is condemnd and deplored; but the Soul of the Church in the Catholic sense as found in the Fathers, the Popes, the theologians is quite untouched.

One last difficulty must be faced. What shall we call those

[17] *Mystici Corporis Christi*, p. 224 (N. C. W. C. translation, par. 60).
[18] Billot, *De Ecclesia Christi*, I, p. 279.

who are incorporated into Christ and therefore into His Church, but not visibly? Strenuous objections have been raised to calling them " members " of the Church, or " members " of the Mystical Body, because they are certainly not on a par with those who belong visibly to the Church. This difficulty is far from new. St. Robert Bellarmine suggested the distinction between members of the Church and those who belong to the Church,[19] reserving the first to those who belong visibily to the visible communion of the Church and enjoy all the consequent rights and privileges, and applying the second to those who are described by the present Holy Father as " ordained unconsciously in desire and resolution " to the Church. The matter is not of great importance provided one thing is clearly borne in mind. Anyone in the state of grace, within or without the Church, lives with the life of Christ, lives by reason of union with Him. They must be joined to Him in some way and that union we usually designate as member with Head, or branch with Vine. A separated member does not live with the life of the organism to which it was formerly attached. A child does not live with the life of its parents once its generation has taken place. To designate that union with Christ we use the word *member*.

Since, however, there is a real distinction between the metaphor and the dogma we can qualify the metaphor without changing the doctrine. Of the two, the doctrine of incorporation into Christ is much more important and should not be lost in squabbling over names. Hence, it is not contradictory to papal teaching to say that the Mystical Body is not limited to those who belong visibly to the Church; nor is it condemned to speak of justified infidels belonging to the soul of the Church, for if they are justified, they live in an inner vital union with Christ, and as St. Ignatius of Antioch declared long ago, " wherever Jesus Christ is, there is the Catholic Church." [20]

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[19] *De Ecclesia Militante*, III, iv, 3.
[20] *Epistola ad Smyrnaeos*, ch. 8, in *PG* V, 714.

THE EFFECT OF BODILY TEMPERAMENT ON PSYCHICAL CHARACTERISTICS

(Second Installment)

III. Particular Types of Temperament

IN this section we will indicate some further points of similarity between the endocrinal and the humoral theories of temperament, particularly in regard to the division of temperament into a various kinds or " types " and the description of the psychical characteristics pertaining to each type. In order to give some idea of how the endocrinologists arrive at their notions as to type classification and the characteristics associated with each type, we will give a brief description of the anatomy and function of some of the major endocrine glands, some data of medical science as to the physiological and psychical phenomena found to accompany pathological hyper- or hypofunction of these glands, and the descriptions of " normal " temperaments which the endocrinologists have evolved from these medical data supplemented by experimentation and clinical observation of endocrinopathic subjects during the pre- or postmorbid states and of non-pathological subjects during certain periods of life when the glands tend to temporary under- or overfunction, such as at puberty, etc. With each of the major types described by the endocrinologists we will compare a type described by the ancients and medievalists, with a view to showing the correspondence between them.

The lack of unanimity among the modern " type " psychologists in the matter of type classification and description is, of course, notorious. Each author or at least each group of authors appears to use an entirely different terminology in the classification of types. Outside the group of endocrinologists, perhaps the most famous classification is Jung's division of " introverts "

and " extroverts," against which has been leveled the criticism that it represents extremes actually seldom found among normal individuals, the majority of whom de facto turn out to be " ambiverts." This is a type of criticism quite generally made of any attempt at type classification, i. e., that it results in the posing of " ideal " categories into which hardly any individual can actually be fitted. Such a criticism might be justified in the case of some type classifications of the moderns, but for the most part it seems to miss the viewpoint of the classifiers, namely, that the types they depict are the pure, unmixed " prototypes " to be used as norms in determining the predominant tendencies of individuals, without implying that every individual, in every respect, can be perfectly fitted into one or another of these ideal pigeon holes. If this could be done, there would be no such thing as " individual psychical differences " but only " group differences," which is obviously contrary to fact.

Even among the endocrinologists themselves there is a considerable difference of terminology in the matter of type classification, though actually the various types described by the different authors are easily reducible one to another. Moreover, it must be remembered that for the endocrinologists temperament is the chief determinant of morphological as well as psychical characteristics; hence some use one set of terms for the morphological classification and another for the psychical classification, while others use one set of terms for both kinds of characteristics. Kretschmer, for instance, has classified the various types morphologically as " pyknic," [134] " athletic," [135] and " asthenic " [136] (later reduced to " pyknic " and " leptosome ") [137] and psychically as " cyclothymes " (extroverts, sociable, cheerful, emotional, etc.) and " schizothymes " (intro-

[134] In Greek, " pyknos " which means " compact," that is, short, broad of skeleton, well-rounded as to arms and legs, etc.

[135] In Greek, " athletikos," that is, large of chest, narrow hips, strong muscles, well-balanced proportion between trunk and limbs, etc.

[136] In Greek, " asthenikos," that is frail, long, slender of skeleton, slight muscular development, etc.

[137] In Greek, " leptos," that is, straight, narrow, thin; of slender physique.

verts, retiring, timid, gloomy, etc.). The Italian school uses the terms "brevilineal," "megalosplanchic" or "brachymorphic,"[138] and "longilineal," "microsplanchic" or "dolichomorphic"[139] for the morphological classification, or for both morphological and psychical classifications prefixes the particles "hyper-" and "hypo-" to the names of the major endocrine glands to represent types resulting from the characteristic over- or underfunction of the particular gland dominant in an individual's make-up, e. g., the hyperthyroid temperament, the hypopituitary, etc. As far as the things signified by these various terms are concerned, in the morphological classifications, Kretschmer's "pyknic" type corresponds to the Italian school's "brevilineal," "megalosplanchic" or "brachymorphic," and his "athletic" and "asthenic," or simply "leptosome," to the "longilineal," "microsplanchic," or "dolichomorphic"; while of his psychical types, the "cyclothymes" fall under any of the types designated by the Italian authors as "hypothyroid," "hypopituitary," "hypersexual" (hypergonad) or "hypersurrenal" (hyperadrenal), and his "schizothymes" under any of the "hyperthyroid," "hyperpituitary," "hyposexual" (hypogonad) or "hyposurrenal" (hypoadrenal) types.

Since a definite morphological build is supposed to accompany a particular psychical make-up and since, according to the endocrinal theory, both are based upon the over- or undersecretion of the dominant gland, it would seem that the "hyper-" "hypo-" terminology is the more representative one; certainly, it is the simpler one. Hence in this paper we will use this terminology to indicate the classification of temperaments according to the endocrinal theory, especially since we are here concerned chiefly with the psychical aspects of temperament and can disregard the exclusively morphological classifications.

The "hyper-" "hypo-" terminology is based on the assumption, or rather the fact, that no person exists who is so perfectly

[138] That is, the thorax is large in proportion to the total height, etc.

[139] In these, the total height is great in proportion to transverse measurements of the thorax, etc.

constituted physiologically that every one of his endocrine glands pours into the blood stream exactly the amount of secretion demanded by the exigencies of the human body. If such did exist we would have, say the endocrinologists, the "perfect man," physically and psychically. In actual individuals there is always, in relation to this ideal state, some excess or defect of endocrine secretions, at least in some of the glands, and this characteristic dysfunction forms the basis of "normal" temperaments. In medicine, the prefixes "hyper-" and "hypo-" in connection with the endocrine glands, are used for a somewhat different purpose, i.e. to indicate an abnormal, pathological, often temporary hyper- or hypofunction of a gland, resulting in a definite disease or disease symptoms. In temperamental type classification they are used to signify that non-pathological hyper- or hypofunction which determines the normal, innate, more or less constant physiological and psychical make-up. As Naccarati says: "When we speak of hyperthyroids and hypothyroids, of hyperpituitaries and hypopituitaries, we do not mean the real pathological cases but we refer only to those individuals having a constitutional or a congenital hyperactivity or hypoactivity respectively speaking which is kept under physiological limits."[140] In between "pathological" and "non-pathological," however, there might be any number of "border-line" variations, which, nevertheless, are usually classified as "normal." Especially in the psychical sphere the characteristics displayed by many so-called "normal" individuals are frequently quite as pronounced as those observed in pathological subjects, not excluding manifestations suggestive of quasi-psychopathic states.

The value of pathological data for the determining of normal types of temperament lies in the fact that there is a certain continuity in the degrees of physiological and psychical symptoms observed in various gland pathologies, a continuity proportionate to the degree of gland hyper- or hypofunction involved. Hence the symptoms accompanying pathological

[140] S. Naccarati, "The Morphological Aspect of Intelligence," *Archives of Psychology*, XL (1921), 3.

hyper- or hypofunction serve as a clue to indicate what tendencies are to be looked for, and usually to be found, in normal individuals as a result of the normal endocrine hyper- or hypofunction determinative of their innate, temperamental constitution.

The numerous variations and combinations of temperamental characteristics found in the majority of individuals are attributable, say the endocrinologists, to the various degrees of endocrine dysfunction which are possible even within the range of "normal," as well as to the great variety of physiological and psychical dispositions made possible by the complex, synergistic-antagonistic interplay between the various glands. As to observable psychical characteristics, another source of variety is the at least apparent modifications that have been superimposed upon the native make-up by such influences as environment, convention, ideals, etc. Nobody knows better than the individual himself, however, what a disparity often exists between his inner self and the self he displays to the world, nor, we might add, the life-long struggle that often goes on, or should go on, between the "urges" of his temperament and the dictates of right reason. However, an experienced observer can usually detect the dominant temperamental trend in most individuals and can thus assign him more or less to a definite "type" category.

There are, then, according to the endocrinal theory, four principal hyper- and four principal hypo- endocrine temperaments; namely, the "hyperthyroid," the "hypersurrenal," the "hypersexual" and the "hyperpituitary," the "hypothyroid," the "hyposurrenal," the "hyposexual" and the "hypopituitary." The traditional division of temperament is, of course, the well known four-fold classification: "choleric," "phlegmatic," "sanguine," "melancholic," based upon the predominance of one or another of these humors in the blood stream. This division is very old, having been suggested at least remotely by Anaxagoras (B. C. 500-428) and Democritus (B. C. 460-362), more definitely formulated by Hippocrates, and modified by Galen. This was, in general, the division of tempera-

ment used by Aristotle, though to Galen seems to be due the credit for having clearly distinguished between the " melancholic " and " choleric " temperaments, which up to his time were included more or less jointly under the denomination " bilious." It is the division that was used during the Middle Ages by such great masters as St. Albert and St. Thomas and which is still widely used, although its basis, the humoral theory as such, has, of course, been discarded. The terminology of this division has been so canonized by an age-old use that it finds a place in the best modern vocabularies. Today it is clearly understood what is meant, for instance, by a " melancholic " or a " phlegmatic " person. In describing the characteristics of these four temperaments, the modern authors to be quoted are those who have simply given a more minute and amplified description of the characteristics assigned to these temperaments by the ancients and medievalists, an amplification made possible by additional centuries of observation and application, though not differing in basic features from the descriptions of the older scholars.

The distinction between psychological " character " and " temperament " must be born in mind if we are to avoid confusion in the understanding of the expression " psychical characteristics of temperament." Psychological character is, as we have said, the sum-total of an individual's psychical traits, considered in themselves, abstracting from their physiological basis. Temperament is, properly speaking, this physiological basis itself. Hence when we speak of the " psychical characteristics of temperament " we refer to the psychical traits, not as they are in themselves and as they pertain to psychological character, but as they are the effects of temperament. Temperament, from our definition, is the structural and functional disposition of bodily organs from the viewpoint of the influence which these dispositions exert upon the shape and development of the body and upon the sensational, emotional, intellectual and volitional activities of an individual.

1. *The Hyperthyroid-Choleric Temperament.*

One of the most important of the endocrine glands is the *thyroid.* Its anatomy is thus described by Dr. Loewenberg:

It consists of two symmetrical lobes which are connected by a third lobe, the isthmus. It is situated in the lowermost portion of the neck anteriorly, each lobe lying on either side of the trachea and larynx. The isthmus connects the lower third of both lobes and is on a level with the second, third and fourth rings of the trachea. The entire gland is enclosed in a capsule which is connected with the fascia of the neck and is adherent to the trachea. The tracheal attachment of the thyroid is responsible for the up and down movement of this gland during deglutition.[141]

In the physiological order, the thyroid exerts a notable influence upon metabolism, upon the circulatory, respiratory, digestive, and cerebrospinal nervous systems, whose functions are speeded up by overactivity of the gland and slowed down by its underactivity. In the psychical order, it has been observed that overactivity of the gland is accompanied by an intensification of the mental and emotional processes; its underactivity, by a corresponding remission in psychical functions.

The thyroid gland, because of its secretion and innervation, acts as the metabolic stabilator of the body, exerting a catabolic influence upon metabolism, facilitating oxidation and generally regulating metabolism. It exerts a definite influence upon growth and development and upon the circulatory system, the respiratory system, and digestive system and the cerebrospinal nervous system.

In embryonic life and during childhood, the normal thyroid gland favorably influences the physical and psychical development of the individual. The hyperactive thyroid may cause prematurity and evidence of excessive metabolic activity. This may be characterized by leaness, excessive sweating, muscular and nervous hyperactivity with mental acuteness. The hypoactive thyroid may cause cretinism or lesser degrees of stunting of mental and physical development.

In the adult, a hyperactive thyroid will cause increased oxidation, thereby speeding up the mental and physical processes, often to the extent of upsetting the fine balance maintained in the normal individual. The sympathetic division of the autonomic nervous system

[141] S. Loewenberg, *op. cit.*, p. 5.

becomes stimulated or irritated, thereby influencing to greater activity all the glands and organs innervated by sympathetic fibers. As an example of sympathetic stimulation in thyroid hyperactivity may be mentioned the well defined train of symptoms in hyperthyroidism, namely tachycardia, hyperexcitability . . . etc.

Suppression of thyroid activity will, on the other hand, cause decreased oxidation with symptoms attributable to sympathetic depression or vagus stimulation. In the young, the result is a characteristic stunting of mental and physical development. In the adult, there occurs a slowing of the mental processes, accompanied by certain physical characteristics.

In addition to the stabilizing influence exerted by the thyroid upon metabolism, there are other functions attributed to this gland: (1) Dextofixer, i. e. it is noted that hypothyroid or athyroid individuals fall prey to infection more readily than do normal individuals; (2) Cardiovascular stabilator, i. e. the heart rate and vascular tension are increased in hyperthyroidism and decreased in hypothyroidism; (3) Emotional and intellectual stabilator, i. e. the emotions and intellect are speeded up in hyperthyroidism and depressed in hypothyroidism.[142]

The thyroid produces these effects upon the various bodily systems and organs through the medium of its hormone or hormones, which it secretes into the blood stream for distribution to the various parts of the body.

The influence that the thyroid gland exerts upon the body is due to its hormone or hormones elaborated from the iodine content of the individual. At the present state of our knowledge only one thyroid hormone is known, namely *thyroxin*. Whether this is one of several hormones, a combination of hormones, or the only hormone that the thyroid elaborates is still a debatable question.[143]

Speaking of symptoms noted in hyperfunction of the thyroid in general, Dr. Loewenberg says: " Excessive nervousness and hyperexcitability are usually present in those who have congenital hyperthyroid tendencies." [144] And Dr. Wolfe: " A hyperacuity of sense perceptions accompanies the general hypersensitiveness of thyroid overfunction." [145] " The increased re-

[142] *Ibid.*, pp. 241-242.
[143] *Ibid.*, p. 239.
[144] *Ibid.*, p. 18.
[145] W. Wolfe, *op. cit.*, p. 747.

flex activity of hyperthyroidism reflects the exaggerated metabolism of the organism."[146]

With regard to symptoms noted in particular pathologies due to thyroid hyperfunction, in "physiological goiter," which is a "generally symmetrical enlargement of the thyroid gland due to simple hypertrophy of all its structures," the individual "usually presents some signs of increased sympathetic nerve activity, i. e., generally he seems high strung, is quite emotional and easily upset."[147] In "simple hyperthyroidism" the patient "appears to be hyperexcitable, is nervous, irritable, and emotional; his actions and mental reactions are very much exaggerated."[148] In "toxic adenoma," which is "an adnomatous goiter that has so irritated the thyroid gland as to cause hyperthyroidism," the patient "complains that he has become 'high-strung,' is easily fatigued and upset or annoyed by trivial things, and is almost constantly in a state of excitement. All functions, physical or mental, are hyperactive."[149]

In "exophthalmic goiter," known also as Graves disease and Basedow's disease, "a constitutional disease of endocrine origin characterized by a peculiar type of thyroid hyperactivity,"[150] "the extremely nervous, jumpy restlessness of the individual, the tremor of the fingers . . . and the tachycardia are quite characteristic."[151] "The usual complaints are nervousness and restlessness, which are manifested at first by unusual excitement and by an increased expenditure of energy so that the patient attempts to do and often accomplishes a great deal more than he did before the onset of his illness."[152] "Speech is usually hurried and, on the least excitement, the voice becomes high pitched. The heart is rapid . . . the pulse rate is often as high as 120 per minute or higher and does not slow down while resting, during sleep, or with digitalis medication."[153] "Mental symptoms may be associated with mental exhaustion or with abnormal excitation. The mentality may

[146] *Ibid.*, p. 746.
[147] Lowenberg, *op. cit.*, p. 267.
[148] *Ibid.*, p. 277.
[149] *Ibid.*, p. 281.
[150] *Ibid.*, p. 284.
[151] *Ibid.*, p. 288.
[152] *Ibid.*, p. 290.
[153] *Ibid.*, p. 291.

be keen and alert and is often misdirected into unwonted channels." [154] "Occasionally patients may develop morbid fears or be in a state of hyperstimulation alternating with depression. Hallucinations of grandeur may alternate with hallucinations of persecution. An inferiority complex may be so entwined with a superiority complex as to create an impossible personality. Loss of memory, loss of sleep, loss of perspective and loss of self control make the individual a decidedly unsocial being." [155]

More severe cases of hyperthyroidism may lead to psychoses.

During the early course of the disease, this acuity of mind and sense perception is manifested by restlessness, nervousness, and insomnia, but as time goes on, the patients become confused, apprehensive, fearful and neurotic, disturbed in orientation and mental adjustment. They acquire abnormal conceptions which make them unfit to cope with the ordinary vicissitudes of everyday life. If the disease remains untreated a true psychosis may develop, but with the reduction of the thyroid toxicity the symptoms are generally relieved, at least to a certain degree.[156]

The neurotic symptoms of hyperthyroidism, such as mental and physical unrest, headaches and insomnia, may lead to more intensive psychotic states under pressure of severe and enduring toxic influences. The irritability, general crankiness and emotional instability, together with the pronounced feeling of inferiority, emphasized by the general brilliance of mind, create incessant scenes of jealousy, family feuds and friction.[157]

With a knowledge of the physiology and symptomatology of the hyperfunctioning thyroid, it is not difficult, according to the endocrinologists, to predict what tendencies an individual endowed with a "normal" hyperthyroid temperament will display. Physiologically, we have an "active" person, possessed of a certain nervous energy, prone to quick nerve excitation and quick muscular movements; a tense, alert person whose whole bodily system tends to overactivity, rapid heart beat, quick metabolic conversion of food into energy, etc. Psychically we see a "high-strung" individual, highly sensitive to sense

[154] *Ibid.*, p. 295.
[155] *Ibid.*, p. 296.
[156] Wolfe, *op. cit.*, p. 747.
[157] *Ibid.*, p. 733.

stimuli, prone to quick and strong emotional reaction, mentally acute and in general psychically "irritable." Observation of persons exhibiting normal, non-pathological hyperfunction of the thyroid verifies these predictions. Pende, speaking of the hyperthyroid temperament rather than of any disease, says:

Thus, in the pure hyperthyroid . . . . I have encountered hypermotivity, very rapid nervous and mental reactions, an active volitive nature, with lively hypercritical intelligence and often brilliancy.[158] There is a special dominance in the hyperthyroid temperament of a marked irritability of the vegetative nervous system, especially of the sympathetic subdivision, as there is also a tendency to great psychical irritability, hypermotivity, cerebral unrest and quick and unstable psychic processes in general. Intelligence develops early and is often of high grade.[159]

Naccarati says:

Not less striking are the psychic characteristics of the hyperthyroids. Being intelligent they possess live ideation, prompt perception, vast imagination, strong memory, and shrewd critique. Endowed with exquisite sensibility the hyperthyroid feels joys and griefs deeply, offenses and wrongs do not pass without a long and profound repercussion on his mood.[160]

And Berman, still speaking of the hyperthyroid *temperament*, says:

Noticeable emotivity, a rapidity of perception and volition, impulsiveness, and a tendency to explosive crises of expression are the distinctive psychic traits. A restless, inexhaustible energy makes them perpetual doers and workers who get up early in the morning, flit about all day, retire late, and frequently suffer from insomnia, planning in bed what they are to do next day.

Certain types of thyroid excess . . . are peculiarly susceptible to emotional instability. They are subject to brainstorms, outbreaks of furious rage sometimes associated with a state of semiconsciousness.[161]

Now anyone familiar with the meaning assigned, even by common usage, to the word "choleric," will immediately recog-

[158] Pende, *op. cit.*, p. 80.
[159] *Ibid.*, p. 260.
[160] Naccarati, *op. cit.*, p. 17.
[161] Berman, *op. cit.*, pp. 249-250.

nize in the "hyperthyroid" temperament, the "choleric" temperament of the traditional four-fold division. A brief glance at the description of the choleric temperament given by some of the ancients and medievalists will serve to verify this identity. When examining these older authors, we should bear in mind the fact that they considered the quality of the blood to be dependent upon the predominance in it of one or another of the humors. Thin, clear, very warm blood, was due to the cholera. Hippocrates, for instance, referring to the choleric temperament, describes individuals "who are endowed by nature with industry and alertness. And they are pertinacious, prone to anger, and intractable, incline more to fierceness than to mildness. And they are very keen and adept at the arts and very proficient in warfare."[162] Aristotle notes that, "Some animals have a keener mind than others because of the thinness and purity [of their blood] for those whose humor is lighter and clearer have a more mobile sensibility."[163] For Galen, says Roback, "the choleric's irritability was attributed to the predominance of the yellow bile in the body."[164]

St. Albert says:

We say that the choleric is easily moved to anger and fervor and in this condition apprehends fiery representations, due to the fervor and lightness of his blood.[165]

Of those animals which have blood, some are of light, foamy choleric blood; they are light and quick of movement and very unstable; as also can be seen in men of this temperament.[166]

The animal endowed with a lighter and purer natural humor has a better sensibility.[167]

But better than all are those which have a warm, thin and clean blood; for such an animal is better disposed for wisdom and courage and things of this sort.[168]

[162] Hippocrates, *Liber de Aere, Aquis, et Locis* (*Opera Omnia* I), p. 89.
[163] *De Partibus Animalium*, II, cap. 4 (ed.: Didot, pp. 235-236).
[164] Roback, *op. cit.*, p. 11.
[165] Albert the Great, *op. cit.*, I, t. 2, cap. 2.
[166] *Ibid.*, XX, t. 1, cap. 11.
[167] *Ibid.*, XII, t. 2, cap. 1.
[168] *Ibid.*

And St. Thomas says:

a disposition to anger is due to a bilious temperament (*cholericam complexionem*); and of all the humours, the bile (*cholera*) moves quickest.[169]

Now the impulse of passion may arise . . . from its quickness, as in bilious persons (*sicut in cholericis*).[170]

At this point we might recall the passages from St. Thomas quoted in the first section, to the effect that a soft skin is indicative of a good sense of touch and a good sense of touch is a sign of a good sensitive nature and a good intellect.

Hence from the fact that one has a better sense of touch, it follows that he has in general a better sensitive nature, and consequently, a better intellect.[171]

. . . and among men, the better is one's sense of touch, the more apt is his mind, as can be seen in those who have soft flesh.[172]

Among men we judge those that are bright and those that are dull from their sense of touch. For those who have hard flesh, and in consequence, poor touch, are mentally dull; but those who possess soft flesh and consequently good touch, are mentally keen.[173]

This correlation between a soft skin, a good sense of touch, a good sensitive nature and a good intellect was a doctrine derived from Aristotle[174] and St. Albert.[175] But to St. Thomas alone, says Fr. Barbado, is due the credit for having distinguished another criterion in this interrelationship, namely, sensitivity to pain: "Saint Thomas indicates three criteria for judging perfection of touch: that of the general temperament, the softness of the skin and another which we have not found in any of the other scholastics, before or after . . . that, namely, of a greater or less sensitivity to pain.[176]

[169] *Summa Theol.*, I-II, q. 46, a. 5.
[170] *Ibid.*, II-II, q. 156, a. 1, ad 2um.
[171] *II De Anima*, lect. xix.
[172] *De Sensu et Sensato*, lect. ix.
[173] *II De Anima, loc. cit.*
[174] *De Anima*, lect. ii, cap. 9.
[175] Albert the Great, *Summa de Creaturis*, q. 33, a. 4.
[176] P. M. Barbado, O. P., "Correlaciones Del Entendimiento con el Organismo," *La Ciencia Tomista*, XXXIII (1926), 196.

Fr. Barbado then quotes the following from St. Thomas and comments on it:

Among the other animals, man has the most certain touch. A sign of this is that man is less able to endure excessive degrees of cold and heat than are other animals. And among men, the better is one's sense of touch, the more apt is his mind, as can be seen in those who have soft flesh.[177]

This text is sufficiently clear for those who know that by the expression "*hujus signum est*," the saint generally indicates that he is about to give an experimental proof. The Angelic Doctor says, then, that the argument from experience, which shows that the sense of touch is more perfect in man than in animals, must be deduced from the fact that the former (men) are not able to stand the rigors of cold to the same extent as the latter (animals), or what is equivalent, that man is more sensitive than animals to the pain produced by the cold. One does not have to extend this argument very far to conclude also that among men, he is to be judged as having a more perfect touch who is more sensitive to pain, and, consequently, in the sensitivity to cold, easy to measure today, we have an efficacious means of judging the positive correlation between sensitivity to pain and the perfection of the intellect. Finally, it seems to us that to the Angelic Doctor should be attributed the merit of having suggested the idea that to determine the perfection of touch, which is correlated with perfection of the intellect, one must pay attention to the sensitivity to heat and cold.[178]

According to the endocrinologists, hyperfunction of the thyroid produces, concomitantly with good mental ability, softness of skin, a good sense of touch, and sensitivity to pain. As Berman says:

The skin of the hyperthyroid . . . is soft.[179] Sensitivity, the ability to discriminate between grades of sensation or acuteness of perception is another thyroid quality. Just as the thyroid plus is more energetic, so is he more sensitive. He feels things more, he feels pain more readily, because he arrives more quickly at the stage when the stimulus damages his nervous apparatus. The electrical conductivity of his skin is greater, sometimes a hundred times

[177] *De Sensu et Sensato*, lect. ix.
[178] Barbado, *loc. cit.*, pp. 196-197.
[179] Berman, *op. cit.*, p. 160.

greater, than the average. Conversely, the thyroid deficient type has a low discriminative faculty. Galton has recorded that idiots hardly distinguish between heat and cold and that their sense of pain is so obtuse that some of the more idiotic seem hardly to know what it is.[180]

Once again St. Thomas can say "I told you so."

Some of the modern authors' amplified descriptions of the choleric temperament, elaborated from the basic features pointed out by the ancients and medievalists, are as follows:

The choleric person is quickly and vehemently excited by any impression mode; he tends to react immediately, and the impression lasts a long time and easily induces new excitement. The choleric is more or less always in a hurry, a man of enthusiasm, usually endowed with considerable intelligence. The choleric is very passionate. Whenever the choleric is bent upon carrying out his plans or finds opposition, he is filled with passionate excitement. He has a sharp intellect and a keen vivacity which influences all his thoughts and plans. He rushes for his goal with great haste and impetuosity. The choleric is very stubborn and opinionated vehemently excited by contradiction, resistance, and personal offences and may even indulge in furious outbursts of anger. Being of an active temperament, he feels a continual inclination to activity and occupation. He cannot be without work and he works quickly and diligently. He can if he does not control the weak side of his temperament, act as an explosive powder in private and public and cause great disturbance.[181]

Tanquerey says: "choleric persons are those in whom passion is not only violent . . . but also enduring. They are energetic, etc. . . ."[182] And Merkelbach: "Cholerics are bold, aggressive . . . but also precipitate, impatient, wrathful, proud . . ."[183] The intensity of the volitional activity displayed by cholerics is described by some writers as "strength of will," but it would seem, according to Ach, that in reality this intensity is necessitated by a weak determinative disposi-

[180] *Ibid.*, pp. 213-214.

[181] C. Hock, *The Four Temperaments* (Bruce: Milwaukee, 1935), pp. 13-31.

[182] A. Tanquerey, *The Spiritual Life* (Reilly: Philadelphia, 1930), p. 11.

[183] B. Merkelbach, O.P., *Quaestiones de Variis Poenitentium Categoriis* (Liege, 1933), p. 69.

tion of the will and that in reality the choleric's will is weak rather than strong, according to the common acceptation of a "strong will." Roback, summing up the doctrine of Ach (*Uber den Willensakt und das Temperament*) on this point, says:

The choleric is marked by increase of motivation with heightened motor and sensory excitability, where only a slight determining disposition is present. Owing to the slight determination, a stronger will act is needed; but owing to the heightened excitability, failure is often the result. An intensity of effort out of proportion to the degree of success goes with a strong feeling reaction which leads to renewed effort and finally success.[184]

It is evident, then, from all this, that the "hyperthyroid" temperament ascribed by the endocrinologists to an excess of thyroxin in the blood is nothing more than a modern, more scientific version of the "choleric" temperament attributed by the ancients and medievalists to a predominance of the "cholera" or yellow bile in the blood, and that the characteristics of the one temperament correspond very closely to those of the other.

2. The Hypothyroid-Phlegmatic Temperament.

From what has been said above with regard to the function and physiological effects of the thyroid gland, we can easily imagine what symptoms its pathological hypofunction would produce. According to Dr. Loewenberg, as already noted,

Suppression of thyroid activity will, on the other hand, cause a general slowing of the physical and mental processes. In the young, the result is a characteristic stunting of mental and physical development. In the adult, there occurs a slowing of the mental processes, accompanied by certain physical characteristics; the heart rate and vascular tension are decreased and the emotions and intellect are depressed in hypothyroidism.[185]

In mild cases of pathological hypothyroidism:

On examination one may note a dull expression and some listlessness. The heart is slow; the blood pressure is usually low. Speech

[184] Roback, *op. cit.*, p. 107.

[185] Loewenberg, *op. cit.*, pp. 240-241.

may be slow and halting and the voice may be thickened. The basal metabolic rate will be found to be low. At times the only complaint is tiredness, a disinclination to be active either physically or mentally, and the development of obesity.[186]

Dr. Wolfe says:

The most marked mental deficiency is noted in hypothyroidism, since the thyroid gland governs brain function. A low intelligence quotient, decreased aptitude in school and lessened response to stimuli accompany a general sluggishness of mind, body and emotions, and a lethargy and forgetfulness which cause the patient to have little interest in the affairs of his life. His movements and speech are as slow as his mental reactions.[187]

Hypothyroidism is also characterized by a marked inclination to sleep, due possibly to a reduction in the sensory reactivity.[188]

With regard to particular hypothyroid diseases, in "myxedema," which is "a condition that may occur in the adult as a result of thyroid insufficiency,"[189] the

symptoms and signs are the reverse of exophthalmic goiter. The onset in non-surgical myxedema is gradual; it will be noticed that the individual has become dull, listless, and mentally, physically and sexually retarded. He moves and thinks slowly and is extremely forgetful. He becomes somnolent, tires easily, etc. The autonomic nervous as well as all functions are depressed.[190]

In the same disease, according to Dr. Myerson,

a patient who may have been a bright, capable and energetic person, full of the eager purposes and emotions of life, gradually becomes dull, stupid, apathetic, without fear, anger, love, joy or sorrow, and without purpose or striving.[191]

In "cretinism," which "may be defined as a state of continuous infancy due to arrested physical and mental development

[186] *Ibid.*, p. 338.
[187] Wolfe, *op. cit.*, p. 739.
[188] *Ibid.*, p. 741.
[189] Loewenberg, *op. cit.*, p. 334.
[190] *Ibid.*, p. 335.
[191] A. Myerson, *The Foundations of Personality* (Little, Brown: Boston, 1921), pp. 12-13.

before or soon after birth results from congenital thyroid insufficiency,"[192] the common symptoms are,

marked general indolence, lassitude, and inertia. Complete cretins, ungainly and seriously inhibited in every action, devoid of response to physical and mental stimuli, often lie about practically immobile throughout life. Such gravely affected individuals as a rule are unable to form the slightest critical conception of their condition, or to arrive at any notion of the occurrences of their daily life. Sometimes they are aggressive, but usually they remain quiet and care only for repose and sleep.[193]

As might be expected, then, the hypothyroid temperament presents a picture just the reverse of that presented by the hyperthyroid temperament. Physiologically, we see an "inactive" person, almost devoid of nervous energy, prone to slow nerve excitation and slow muscular movements, a lethargic, languid person whose whole bodily system tends to underactivity, slow heart beat, slow metabolic conversion of food into energy, etc. Psychically, we have an apathetic person, only dully reactive to sense stimuli, prone to slow and feeble emotional excitation, mentally slow and in general psychically "calm." Describing this temperament, Pende says:

We find in the hypothyroid an apathetic, slow character, hypoevolute intelligence, marked especially by a lack of critical faculty, with predominance of concrete over logical thought.[194]

In the psychic field we find apathy and slowness of all psychic processes. The intelligence is hardly ever completely evolute, almost never of high grade, more often below the average.[195]

Berman says:

Thyroid deficients are quite conscious of the limited reserve of energy at their command. Also that they need plenty of refreshing sleep. Taciturn, inarticulate, lazy, slow, tired are the adjectives applied to them by their friends as well as by their enemies.[196]

The memory of thyroid insufficients is wretched.[197]

[192] Loewenberg, *op. cit.*, p. 318.
[193] *Ibid.*, pp. 325-326.
[194] Pende, *op. cit.*, p. 80.
[195] *Ibid.*, p. 231.
[196] Berman, *op. cit.*, p. 213.
[197] *Ibid.*, p. 214.

A child with a hypothyroid temperament is characterized by, undergrowth, physical and mental, a persistent babyishness and a retardation of self-control development. He needs an excess of sleep, sleeps heavily, needs sleep during the day, when awakened in the morning still feels tired and rather dull and restless, dresses slowly, has to be coaxed or forced to dress, gets to school late nearly every morning, does badly at the school, reaction time, learning time and remembering time being prolonged as compared with the average, and is lazy at home lessons.[198]

From a consideration of all these characteristics, it is not difficult to discover in the "hypothyroid" temperament, the "phlegmatic" temperament ascribed by the ancients and medievalists to the "phlegma" in the blood. Hippocrates, describing the phlegmatics, says they are "persons of a humid temperament, and very sleepy. And they are dull at the arts, not disposed to labor, and are for the most part weak by nature. They are sluggish rather than keen and alert."[199] For Galen, says Roback, "the phlegmatic person's apparent slowness and apathy were traced to the influence of the phlegm."[200] And he quotes Maimonides, "For instance, a man whose natural constitution inclines towards dryness, whose brain matter is clear and not overloaded with fluids, finds it much easier to learn, remember, and understand things than the phlegmatic man, whose brain is encumbered with a great deal of humidity."[201] St. Albert says: "But those whose blood contains much phlegma are lazy and sleepy and soft with a feminine softness and they have a very poor memory. They sleep a great deal and their intellect is dull."[202] St. Thomas points out the phlegmatic's weakness of will: "a man fails to stand to that which is counselled, because he holds to it in weakly fashion by reason of the softness of his temperament. This is also the case with phlegmatic temperaments."[203]

[198] *Ibid.*, p. 248.
[199] Hippocrates, *loc. cit.*
[200] Roback, *op. cit.*, p. 11.
[201] *Ibid.*, p. 48.
[202] Albert the Great, *De Animalibus*, XX, t. 1, cap. 11.
[203] *Summa Theol.*, II-II, q. 156, a. 1, ad 2um.

Moreover, the "phlegma" was one of the "cold" humors, which would, as we noted in the previous chapter, produce only scanty "spirits" with a resulting retardation of all the psychical functions, for as St. Thomas says, "when the spirits are few nature constricts them and confines them to their source," [204] whereas "when the spirits are many nature is able to retain some in their source and still pour them out in abundance" [205] and "a spirit abundant in quantity abounds also in power." [206]

Hock's description of the phlegmatic temperament is as follows:

> The soul or mind of the phlegmatic person is only weakly or not at all touched by impressions. The reaction is feeble or entirely missing. Eventual impressions fade away very soon. He has little interest in whatever goes on about him. He has little inclination to work, but prefers repose and leisure. With him everything proceeds and develops slowly. He is not easily exasperated either by offenses, or by failures or sufferings. He is very much inclined to ease, to eating and drinking; is lazy and neglects his duties. He has no energy, and does not aspire to lofty things.[207]

And Merkelbach notes that "the phlegmatics are mild, peaceful, easily led, but they can also be petty, inconstant, lazy, indifferent: with difficulty are they aroused to good, they lack strong passions, are easily content with mediocrity, they love peace and quiet." [208] Tanquerey says: "The phlegmatic are slow and awkward in action and so indifferent as to hardly feel the need of loving or of being loved. They have little taste for active work, but when they must get down to it, they succeed best in those undertakings which demand patience rather than imagination and feeling." [209]

From this comparison of the characteristics of the "phlegmatic" with those of the "hypothyroid" temperament, it is clear that these are but two names for the same temperament. While the ancients and medievalists attributed these charac-

[204] *IV Sent.*, d. xlix, q. 3, a. 2.
[205] *Ibid.*
[206] *Ibid.*
[207] Hock, *op. cit.*, pp. 59-60.
[208] Merkelbach, *op. cit.*, p. 69.
[209] Tanquerey, *op. cit.*, p. 10*.

teristics to the "phlegma" content of the blood stream, the endocrinologists ascribe them to the deficient thyroxin content.

3. *The Hypersurrenal-Sanguine Temperament.*

Dr. Loewenberg thus summarizes the anatomical features of the adrenal glands:

The adrenal glands are two in number and yellowish in color. They are situated retroperitoneally, each imbedded in the perirenal fat above its respective kidney. They are composed of a *cortex* and a *medulla* which differ from each other in gross appearance, histologic structure, embryologic origin, function and in the elaboration of distinctive hormones. The right adrenal is somewhat triangular in shape, being likened to a "cocked hat." It is smaller than the left, measuring approximately 1½ inches in length, ½ inch in breadth, and ½ inch in thickness, and weighs between 30 and 40 grains. The left adrenal is somewhat larger than its fellow and is more or less diamond shaped. It measures approximately 1¾ inches in length, ¾ inch in breadth, and about ¼ inch in thickness, and weighs between 40 and 45 grains.

On gross section the adrenals generally show three layers. 1) A peripheral layer, which is yellowish gray in color; 2) An intermediary zone, which is firm and yellowish in color, the *cortex*. 3) A large inner layer, which is soft and brownish red in color, the *medulla*.[210]

From the physiological standpoint, "it is necessary to consider separately the cortex and the medulla as each structure elaborates individual hormones. Though these structures are intimately fused in all mammals as an apparently single gland, they nevertheless vary greatly in their physiologic action because of the dissimilarity of their hormones."[211]

As to the function of the adrenal *cortex*, the same author says:

1. It is essential to life. 2. It influences gonad development and function. 3. It maintains a vital influence upon body function and metabolism, as is noted by the phenomena occurring as a result of cortical destruction and of cortical stimulation. Partial destruction or total ablation of all cortical tissue will produce during the sur-

[210] Loewenberg, *op. cit.*, pp. 514-515. [211] *Ibid.*, p. 519.

vival period: (a) loss of weight, (b) extreme weakness, (c) fall in body temperature, (d) lowering of the basal metabolic rate, (e) dehydration, (f) definite loss of blood chlorides, (g) rise in the inorganic phosphates, (h) retention of potassium in the blood, (j) decrease in urea clearance, (k) decreased phenosulphonphthalein excretion, (l) increased excretion of sodium by the kidneys, therefore lowered concentration of sodium in the blood, (m) diminution of blood volume, (n) lowering of blood pressure, (o) moderate hypoglycemia (blood sugar deficiency), (p) renal failure, (q) dyspnea (exhaustion), (r) decrease of carbon dioxide capacity, (s) prostration, (t) convulsion, (u) coma, and (w) finally death. Stimulation of the adrenal cortex as a result of hypertrophy (hyperfunction), tumor, hyperemia, or other conditions will cause (a) increase in weight, (b) virilism, (c) increased basal metabolism, (d) hyperemia, (increased blood volume) (e) hypergonadism in the male and masculine perversion with hypertrichosis in the female, (f) increased blood pressure, (g) occasionally hyperglycemia (increase in blood sugar), (h) pseudo-hermaphrodism in congenital tumor, and (i) macrosomia precox in tumors acquired during childhood and adolescence.[212]

With regard to the hormone elaborated by the adrenal cortex and upon which its above mentioned activities depend, Dr. Loewenberg says:

It has been proven beyond any doubt that the adrenal cortex elaborates at least one potent hormone which is essential to life. Its administration in sufficient quantities will help to maintain life and to restore vigor and other cortical functions in decorticated subjects. The adrenocortical hormone (cortin, interrenalin, interrenin, etc.) irrespective of the method employed in its extraction, when active, has a definite physiological action.[213]

The function of the adrenal *medulla* is indicated by the activity of its hormone:

The adrenal medulla is not essential to life . . . The function of the adrenal medulla depends largely upon its hormone variously known as epiephrine, adrenalin, adrenin and suprarenalin, which, while not essential to life, helps to preserve life by stimulating the individual to greater activity for self-preservation when life is threatened. The adrenal medulla is credited by Cannon as being

[212] Loewenberg, *op. cit.*, pp. 520-523. [213] *Ibid.*, pp. 523-526.

the " reserve or emergency gland," or the so called " minute man " of the body. It is supposed to assume secretory activity chiefly in cases of mental and emotional stress. It prepares the organism for either " fight " or " flight " by speeding up the circulation, raising arterial pressure, mobilizing glycogen so as to facilitate muscular activity and stimulating the sympathetic nervous system.[214]

Adrenalin (suprarenalin or adrenin, natural or synthetic) has a powerful and immediate effect upon various structures of the body. Its effect is almost evanescent, being speedily worn off because of its rapidly oxidizing properties. The action of this hormone may be summarized as follows: 1. It stimulates the sympathetic division of the autonomic nervous system, which is evidenced by dilation of the pupils, acceleration of the pulse and inhibition of gastrointestinal peristalsis. 2. It mobilizes glycogen from the liver and muscles. 3. It raises arterial tension. 4. It raises the basal metabolic rate and increases heat production. It affects the various organs of the body as follows: (a) The Eye. It causes dilation of the pupil . . . (b) The Heart. It produces acceleration and increased force of the beat. . . .[215]

With regard to psychical manifestation noted in pathologies due to adrenal hyperfunction, Dr. Loewenberg says: " The individual is usually effusive and presents a picture of euphoria (buoyancy, optimism). The mentality is as a rule above normal.[216] " Psychic disturbances and emotional *instability* characterized by fits of depression or by extreme ecstasy are common." [217]

Bearing in mind the functions of the adrenal glands and the symptoms accompanying pathological hyperfunction, what type of temperament might we expect in an individual whose adrenals tend to hyperfunction? It might be supposed, according to the endocrinal theory, that all these various functions of the adrenal glands and the activities of their several hormones would not be of equal importance as regards their effects upon the temperamental disposition of the various organs affected by them. Neither could they all be supposed to have a definite influence upon the psychical characteristics. To determine experimentally precisely what effect each individual function of

[214] *Ibid.*, p. 528.
[215] *Ibid.*, pp. 529-531.
[216] *Ibid.*, p. 554.
[217] *Ibid.*, p. 577.

the glands would have upon a person's psychical make-up, would be, at the present state of knowledge, quite impossible. However, empirical observation indicates that the more important influences of the glands upon the psychical characteristics are those exercised through the medium of metabolism, blood volume, blood pressure, nerve excitation, etc. Now it is precisely in their effects upon these functions that the activities of the adrenal cortex and the adrenal medulla coincide more or less. Another important function presented by the adrenals, namely their effect upon the sugar content of the blood, is also more or less common to both cortex and medulla. Therefore, while from the physiological viewpoint it is necessary to consider the cortex and the medulla separately, from the viewpoint of their effect upon psychical characteristics they can be considered jointly as determining one type of hyper-temperament, or one type of hypo-temperament, referred to respectively by the endocrinologists simply as "hypersurrenal" and "hyposurrenal" without any distinction as to the component parts of the glands. There is, of course, the possibility that even within the range of normal temperamental hyper- or hypoactivity, the two lobes of the adrenals may not synchronize in their activity, i.e., the cortex might tend to hypersecretion and the medulla to hyposecretion, and vice versa. It is not likely, however, that the hyperfunction of one lobe would be in such perfect counter-balance to the hypofunction of the other, that the influence of one lobe would completely neutralize the influence of the other; either the hyper- or hypoactivity would predominate to some degree. The counter-influence exerted by the other lobe would tend only to modify the influence of the lobe whose hyper- or hypoactivity predominates. The net result of this would be, most likely, a less pronounced hyper- or hyposurrenal temperament.

Besides the above mentioned functions common to both the cortex and the medulla and exerting an important influence upon temperament, a new element has been introduced by the adrenal cortex, namely its influence upon male sex gland development and function, its hyperfunction having a masculizing

effect on both men and women. The relation of the sex element to temperament we will discuss later when speaking of the "hypersexual" and "hyposexual" temperaments. For the present it is sufficient to note that increased gonad activity is a concomitant of adrenal hyperfunction.

It will be noted that some of the functions of the adrenals having a more important influence upon temperamental characteristics, viz., regulation of metabolism, blood volume, blood pressure, nerve excitation, energy mobilization, etc., are precisely those which are attributed also, though in a somewhat different manner, to the thyroid. In connection with the hyperfunction of the adrenals, therefore, we would expect to find somewhat the same psychical manifestations as those observed to accompany hyperfunction of the thyroid, e.g., quick mental and emotional reaction, excitability, energy, precipitousness, etc. Observation has shown, say the endocrinologists, that hypersurrenal individuals do display these characteristics to some extent. Speaking of the normal hypersurrenal *temperament*, Pende says: "In the hyperadrenal variety we find . . . a robust intelligence."[218] "The character is active, impulsive . . . restless and strong-willed."[219] But observation also shows that there is an important difference in these characteristics as displayed by hypersurrenals and hyperthyroids, namely that in the hypersurrenals the psychical reactions are much less enduring than in the hyperthyroids, and impressions made upon them tend to fade quickly, which is not the case with the hyperthyroids.

A possible explanation of this difference in reaction might be found in several peculiarities of the adrenals as to the manner of releasing their hormones and the activities of the hormones themselves, especially with regard to adrenalin. One of these peculiarities is that the adrenal medulla, besides constantly supplying hormones to meet the normal requirements of the body, has the ability of instantly increasing its adrenalin output to meet extraordinary demands of various organs in

[218] Pende, *op. cit.*, p. 80. [219] *Ibid.*, p. 93.

times of mental and emotional stress. As Jane Stafford says: "The adrenal glands discharge relatively large amounts of hormone under emotional stimuli, such as rage or fear. The excess adrenalin discharged as a result of strong emotion causes the heart to pump more quickly and forcefully; the liver to release its store of sugar for additional fuel for the body; the air passages to dilate, permitting freer breathing; and the blood vessels of the skin and abdominal organs to contract, thus increasing the amount of blood available to the muscles and nerves which must meet the emergency." [220] And as Cannon says: "Exceedingly delicate biological tests . . . and an examination of the glands themselves, afford clear evidence that in pain and deep emotion the glands do, in fact, pour out an excess of adrenin into the circulating blood." [221] One of the characteristic features of adrenalin is that it quickly disappears. According to Dr. Loewenberg, as already noted: "Adrenalin (suprarenalin or adrenin, natural or synthetic) has a powerful and immediate effect upon various structures of the body. Its effect is almost evanescent, being speedily worn off because of its rapidly oxidizing properties." [222] And according to Cannon: "The destruction of adrenin and the disappearance of the effect which adrenin would produce are thus closely parallel." [223]

These functional peculiarities of the adrenal medulla and its hormone would furnish, according to the endocrinologists, a plausible explanation of the strong but quickly transient psychical reactions of the hypersurrenal temperament and would account for the vivacity, instability, and superficiality found in this type. The hypersurrenal's constant supply of adrenalin tends to excess, with a resulting tendency to overactivity on the part of all the organs and systems affected, i. e., metabolism, blood pressure, sympathetic nervous system, glycogen mobilization and distribution, etc. This physiological hyperactivity would result in a constant inclination to mental and emotional vivacity. When notable mental or emotional stimuli are presented to him, he would react quickly and strongly. The re-

[220] J. Stafford, *op. cit.*, p. 252.
[221] W. B. Cannon, *op. cit.*, p. 63.
[222] Loewenberg, *op. cit.*, p. 529.
[223] Cannon, *op. cit.*, p. 54.

sulting psychical excitation would effect an immediate release of additional adrenalin, the amount of increase being proportionally greater in him than in the person whose supply is deficient. This would result in a further acceleration of all the biological functions mentioned above and a still greater mental and emotional activity, often accompanied by energetic physical motions as a result of the greatly increased energy produced by the release of large quantities of sugar into the blood stream, for, as Cannon says, "in man, emotional excitement (e.g. fear, pain, worry, mental anxiety, excitement such as at games, during exams, etc.) produces temporary increase of blood sugar" [224] as a result of the released adrenalin.

With the quick destruction of adrenalin, due, as noted above, to its rapidly oxidizing properties, there would be a proportionally rapid subsidence of the biological and psychical overactivity. This would mean that mental and emotional impressions would not be very deep or lasting. A certain carelessness and optimism would result from the tendency to forget past difficulties and unpleasant experiences. The result of this would be a general tendency to superficiality. Thought would be brilliant and energetic rather than profound and sustained. There would be emotional instability, a rapid change of mood, etc. The will, while strong and active during mental and emotional excitement, would tend to inconstancy when the impressions had faded. As Pende says, "This type has great intellectual energy and presents the picture of euphoria." [225] And according to Berman: "chemical quantitative studies have shown that by repeated stimulation the adrenal glands may be exhausted of their reserve supply of secretions, which returns only insufficiently if not enough time is given for their recuperation. There results . . . a loss of appetite and zest in life, and a mental instability characterized by an indecision, a weepishness upon the slightest provocation." [226] But with the restoration of adrenalin, vivacity and optimism would return. All of which would help to explain the changeableness and superficiality of this temperament.

[224] *Ibid.*, p. 75. [225] Pende, *op. cit.*, p. 234. [226] Berman, *op. cit.*, p. 81.

With this picture of the hypersurrenal temperament as sketched by the endocrinologists, one immediately associates the "sanguine" temperament attributed by the ancients and medievalists to predominance in the blood stream of the humor known as the *sanguis* or blood proper. Galen, as already noted, gives "enthusiasm" as the predominant characteristic of this temperament. St. Albert points out the sanguine's *euphoria* and good mental qualities. Contrasting this temperament with its opposite, the melancholic he says: "For we say that the melancholics are sad and grave. But we see that the sanguine have the opposite affections." [227] They are "of a very joyful temperament and a cheerful aspect, always hopeful, not depressed by misfortunes and they have a good intellect and good qualities." [228] Moreover, while the *sanguis* was one of the "warm" humors, it was, as already noted, "warm and moist," and hence more temperate than the *cholera*, which was "warm and dry." Consequently the "spirits" derived from the *sanguis*, while possessing to some extent the heat and speed of the choleric spirits, were, nevertheless, more temperate and more "midway between thickness and thinness," to use St. Thomas' expression.[229] Hence they would produce warm but less violent passions than would the choleric spirits. In persons of sanguine temperament, anger, for instance, would be less violent and less enduring than in the cholerics or melancholics. They would be optimistic because, as St. Thomas says, "heat in the heart banishes fear and raises hope," [230] but perhaps not as bold and daring as the cholerics. They would incline more to the gentle passions like love and joy. "Sanguine temperaments," says St. Thomas, "are more inclined to love." [231] They would be those people who, he says "become joyful on slight provocation" because their blood, like wine, "generates an abundance of clear, temperate spirits, midway between thickness and thinness." [232]

[227] Albert the Great, *op. cit.*, I, t. 2, cap. 2.
[228] *Ibid.*, XX, t. 1, cap. 11.
[229] *IV Sent.*, d. xlix, q. 3, a. 2.
[230] *Summa Theol.*, I-II, q. 45, a. 4.
[231] *Ibid.*, q. 48, a. 2.
[232] *IV Sent., loc. cit.*

Hock, elaborating upon the observations of the older writers, points out the sanguine's tendency to quick but fleeting emotional reactions:

The sanguine person is quickly aroused and vehemently excited by whatever influences him. The reaction follows immediately, but the impression lasts but a short time. The passions of the sanguine are quickly excited, but they do not make a deep and lasting impression; they may be compared to a straw fire which flares up suddenly, but just as quickly dies down, while the passions of a choleric are to be compared to a raging, all devouring conflagration.[233]

Regarding the sanguine's instability he says:

Because the impressions made upon a sanguine person do not last, they are easily followed by others. The consequence is a great instability. The sanguine is always changing in his moods; he can quickly pass from tears to laughter and vice versa; he is fickle in his views; today he may defend what he vehemently opposed a week ago; he is unstable in his resolutions. He is also inconsistent at his work or entertainment.[234]

And as regards his mental superficiality:

The sanguine person does not penetrate the depth, to the essence of things, he does not embrace the whole, but is satisfied with the superficial and with a part of the whole. Before he has mastered one subject, his interest relaxes because new impressions have already captured his attention. He loves light work which attracts attention, where there is no need of deep thought, or great effort. The sanguine does not like to enter into himself, but directs his attention to the external. In the sanguine the five senses are especially active, while the choleric uses rather his reason and will. The sanguine sees everything, hears everything, talks about everything. He is noted for his facility and vivacity of speech, his inexhaustible variety of topics and flow of words.[235]

And his optimism is shown:

The sanguine looks at everything from the bright side. He is optimistic, overlooks difficulties, and is always sure of success. If he fails, he does not worry about it too long but consoles himself easily.

[233] Hock, *op. cit.*, pp. 35-37. [234] *Ibid.*, pp. 35-36. [235] *Loc. cit.*

Even if the sanguine is occasionally exasperated and sad, he soon finds his balance again. His sadness does not last long, but gives way quickly to happiness.[236]

Moreover,

A sanguine is quickly excited by an offense and may show his anger violently, but as soon as he has given vent to his wrath, he is again pleasant and bears no grudge . . . The sanguine person does not like to be alone; he loves company and amusement; he wants to enjoy life . . . is inclined to inordinate intimacy and flirtation . . . However his love is not deep and changes easily.[237]

Speaking of the same temperament, Merkelbach says: " those who are sanguine feel promptly and vividly but not intensely and perseveringly, hence they are very unstable."[238] And Tanquerey notes:

Sanguine or impulsive persons are the ready prey of the first vivid impression that makes itself felt. They are expansive, volatile and spasmodic, passing quickly from gaiety to sadness, from hope to anxiety, from enthusiasm to discouragement . . ." They are " quick of movement, they have an engaging smile and a sprightly appearance. They are light-hearted and extremely changeable, giving themselves over readily to the most contrary emotions and acting on the spur of the moment. Gifted with a lively imagination and an ardent heart, they attain success in literary work, speak with great facility and charm to all with whom thy come in contact.[239]

Again we conclude that the temperament denominated by the endocrinologists as " hypersurrenal " and attributed by them to hypersecretion of the adrenal glands is substantially the same as the " sanguine " temperament, classified and basically described hundreds of years ago by the ancients and medievalists.

4. *The Hyposurrenal-Melancholic Temperament.*

We have already noted some of the physiological effects of adrenal hypofunction. The most important in relation to psychical characteristics are probably the general weakening of

[236] *Ibid.*, pp. 35-42.
[237] *Ibid.*, pp. 38-41.
[238] Merkelbach, *op. cit.*, p. 68.
[239] Tanquerey, *op. cit.*, p. 10*.

the system, lowering of the basal metabolic rate, diminution of blood volume, lowering of blood pressure and blood sugar and the production of fatigue and nervous disturbances.

With regard to pathological symptoms, speaking of Addison's disease, for instance, which is "a definite entity resulting from hypofunction of the adrenal cortex,"[240] Dr. Loewenberg says:

The nervous and mental symptoms which occur in advanced cases of Addison's disease may be due to a general asthenia associated with anemia. The intellect may not be definitely affected, but the mental languor may be such that the patient does not take the trouble to think or invoke any mental processes.[241]

The so-called "neuro" who has indefinite complaints, or rather a multiplicity of complaints, and who has hypotension, a great variety of psychic and nervous disturbances, and is definitely fatigued may, in many instances, be suffering from hypofunction of the adrenal cortex.[242]

In "hypoglycemia," a condition "due to an insufficient quantity of sugar being released into the blood stream," and which is marked "in hypoadrenalism, in Addison's disease and in destructive tumors of the adrenal medulla," among the common symptoms are "anxiety; nervous trembling." When the condition is chronic, it is manifested by malaise lassitude, lack of physical and mental concentration often to a degree where it is impossible to do any physical and mental work. Long standing or severe cases of hypoglycemia because of their nervous phenomena are occasionally diagnosed as psychoneurosis, or other nervous disorders. The more common nervous phenomena are periodic attacks of mental confusion, often associated with amnesia, so that the patient does not remember what he said or did during such periods.[243]

Berman, speaking of symptoms observed in nervous diseases due to pathological hypofunction of the adrenals, says:

In some, mental and physical elasticity are totally lost, and even the slightest exertion in either field often causes so much weariness and exhaustion as to be prohibited. Depression and even melancholia are associated with the fear of not being able to accomplish good work hitherto easy and enjoyed. Sometimes they are obsessed

[240] Loewenberg, *op. cit.*, p. 556.
[241] Lowenberg, *op. cit.*, p. 561.
[242] *Ibid.*, p. 571.
[243] *Ibid.*, pp. 466-478.

with the thought that they have lost their nerve completely, and so dread to commit themselves in even the most trivial situations. The vacillating frame of mind is so distressing at times as to arouse thoughts of suicide. The brooding over themselves and their troubles is one of the distinctive feasures of the whole complex.[244]

It will be noted that some of the physiological effects of adrenal hypofunction are similar to those produced by hypofunction of the thyroid, as was the case in regard to hyperfunction of the adrenals and the thyroid. There should be, therefore, according to the endocrinologists, a certain coincidence between the psychical characteristics of the hypothyroid temperament and those of the hyposurrenal temperament. Observation verifies this assumption. According to Berman: "The congenital adrenal inadequate is defined (limited) in physical and mental energy."[245] "A fatigability that goes with a low blood pressure, lowered body temperature and a disturbed ability to utilize sugar for fuel purposes is another of his chief complaints."[246] In children of this temperament: "Lack of appetite, lack of energy, lack of response to stimuli are its keynotes and the motifs of the later years of childhood."[247]

But, again as in the case of the hyperthyroid and hypersurrenal temperaments, there are some important differences in the corresponding hypo-temperaments. The hypothyroid is a "nerveless" individual of blunt sensibility. His reaction to mental and emotional stimuli is very slow and impressions eventually made are light. The hyposurrenal, on the other hand, is really of a nervous, sensitive constitution, but due to a general lack of energy, his reactions are slow, though impressions eventually made may be very deep. He can work himself up gradually to a state of great mental and emotional excitement. This combination of sensitivity and inability to react quickly and energetically has far-reaching psychical consequences. It tends to produce a lack of self-confidence, a proneness to discouragement, indecision, anxiety, pessimism, strong

[244] Berman, *op. cit.*, pp. 81-82.
[245] Berman, *op. cit.*, p. 240.
[246] *Ibid.*, p. 239.
[247] *Ibid.*

aversions, sensitivity to grief and a brooding introspection. As Berman says:

> The adrenal insufficient is important because he is to be seen everywhere. Cold hands and cold feet plague him, cold feet psychically as well as physically, for a chronic and obsessive indecision is one of his most prominent complaints.[248] He cannot sleep when he lies down, he cannot keep awake when he stands up. He cannot concentrate, but still he is pitifully worried about his life. As he works himself up into his hysterical state as a reaction to a disagreeable person or problem, irregular blotches may appear on his face and neck.[249] Dismissed sometimes contemptuously as weaklings, they are accused of laziness, craziness and haziness.[250]

And Pende, still speaking of the hyposurrenal temperament, says: " From the psychic point of view there is a tendency to depression, melancholia and pessimism, with affectivity and sensitivity to grief often much exaggerated." [251]

As to mental ability, the endocrinologists seem to have difficulty in classifying the hyposurrenal individual. Pende, for instance, in his *Constitutional Inadequacies* (p. 80), says, " The intelligence is normal." Later in the same book (p. 243) he says, " In the hypoadrenal variety there is an asthenic, depressed, abulic character, with an intelligence which is in some cases hypoevolute and in others, hyperevolute."

In all these tendencies of the hyposurrenal temperament, we find a great similarity to the characteristics assigned by the ancients and medievalists to the " melancholic " temperament, which they ascribed to the predominance of the " atra-bile " or " black bile " in the blood stream. Aristotle, perhaps in an attempt to explain the slow but gradually intensifying reactions noted in this temperament and the " laziness, craziness, and haziness " spoken of by Berman, distinguished between the " cold melancholic " and the " warm melancholic," assigning different characteristics to each and attributing the difference to low or high temperature of the atra-bile, which though by nature cold, was capable of becoming heated to a high degree. He says:

[248] *Ibid.*
[249] *Ibid.*, p. 82.
[250] *Ibid.*, p. 239.
[251] Pende, *op. cit.*, p. 243.

The atra-bile becomes both very hot and very cold as water, though it is cold, if it shall have been sufficiently heated to boil, becomes hotter than the flame itself, and likewise stone and iron when they have been heated, become hotter than the coals, although by nature they are cold. But the naturally cold atra-bile if it exceeds the proper quantity in the body, causes stupefaction or lethargy or depression of soul, or fears; but if it becomes very much heated, it causes hilarity and singing, mental aberrations, eruption of ulcers and other things of this kind.

Those in whose nature a temperament of this kind is rooted soon acquire various characteristics, certain ones for the one temperament, others for the other, e. g., those in whom it (the atra-bile) is abundant and cold, become dull and foolish; but those in whom it is superabundant and warm become wrathful, ingenuous,, prone to love and are easily moved to anger and cupidity; some also become very talkative.[252]

In describing the "warm melancholic," Aristotle may be depicting what the endocrinologists call the "compensated adrenal type," i. e., a modification of the hyposurrenal temperament in which adrenal hypofunction is offset to some degree by adequate thyroid function.

St. Thomas thus comments on Aristotle's observation that melancholics seek compensation for their sadness:

And he says that the melancholics, according to their natural disposition need remedies for their sadness because their body suffers a sort of corrosion because of the dryness of their temperament. And hence they have a vehement appetite for pleasure, by which sadness of this kind is repelled. And because the melancholics strongly desire delectation, hence it is that they frequently become intemperate and depraved.[253]

We might point out here a parallel reaction noted by Berman in hyposurrenals as a result of "war strain":

But such have been the psychologic reactions to the war that all kinds of compensations in the way of dangerous mental states have become frequent in these inadequate adrenal types. A trend to violence and a resentful emotionalism are combined with desperate

[252] *Problematum*, IV, sect. 30 (ed.: Didot, p. 267).
[253] *In IV Ethic*, lect. 14.

attempts to spur the jaded adrenals with artificial excitements. A survey of drug addicts would probably show a definite percentage of this type. The same applies to certain petty criminals and lawbreakers.[254]

St. Albert also speaks of the sadness of the melancholic, his exaggerated fears, the gravity and obscurity of his thoughts and his anti-social tendencies:

For we say that the melancholic are sad and grave, that they suffer from terroristic imaginations and that they are held in this condition by the heaviness, frigidity and fearfulness of the melancholic blood, for images received in a mind disposed to fear, become terroristic.[255]

But those whose blood is cold, fetid, and thick, (melancholics) have profound and as it were immovable thoughts; and their ideas are obscure . . . they are timid by nature: and their fear does not easily leave them nor do they accept consolation, but animals of this sort become desperate and men suffer the loss of reason and mental disorders. And the men sometimes find no pleasure in themselves and are suspicious of others, they kill themselves and are not lovable; they prefer solitude and are subject to many other evils and are frequently thieves even when they do not need the things they steal (kleptomaniacs), and often suffer from insomnia because of their dry and cold temperament.[256]

We have already noted how Aristotle, St. Albert and St. Thomas attributed slow-rising but eventually intense and long enduring anger to an abundance of "fibrin" or small particles of melancholia in the blood, as well as the good mental qualities resulting from a variety of melancholia, that, namely, which has a sufficient mixture of moisture. St. Thomas also speaks of the "melancholics who are greatly moved by their phantasms because, due to their earthy nature, the phantasmal impressions are more firm in them."[257] And those "in whom the spirits are earthy and obscure are prone to sadness."[258]

[254] Berman, *op. cit.*, p. 242.
[255] Albert the Great, *op. cit.*, I, t. 2, cap. 2.
[256] *Ibid.*, XX, t. 1, cap. 9.
[257] *De Memoria et Reminiscentia*, lect. 8.
[258] *IV Sent.*, d. xlix, q. 3, a. 2.

Hock gives a more detailed analysis of the traditional characteristics of the melancholic temperament. He speaks of his slow but gradually deepening impressionability: "The melancholic person is but feebly excited by whatever acts upon him. The reaction is feeble, often almost imperceptible. But this feeble impression grows stronger and at last excites the mind so vehemently that it is difficult to eradicate it." [259] Of his introspection and the gravity of his thoughts, he says:

The thinking of the melancholic easily turns into reflection. The thoughts of the melancholic are far-reaching. He dwells upon the past is preoccupied by occurrences of the long ago; he is penetrating; is not satisfied with the superficial, searches for the cause and correlation of things; seeks the laws which affect human life, the principles according to which man should act. His thoughts are of a wide range; he looks ahead into the future; ascends to the eternal. His very thoughts arouse his own sympathy and are accompanied by a mysterious longing. Often they stir him up profoundly . . . The untrained melancholic is easily given to brooding and to daydreaming.[260]

The same author speaks of the melancholic's love of solitude, his sadness, passivity and lack of courage in the face of difficulties:

The melancholic does not feel at home among a crowd for any length of time; he loves silence and solitude. Being inclined to introspection he secludes himself from the crowds, forgets his environment, and makes poor use of his senses, eyes, ears, etc. In company he is often distracted, because he is absorbed by his own thoughts. The melancholic looks at life always from the serious side. At the core of his heart there is always a certain sadness.

The melancholic is a passive temperament. The person possessing such a temperament, therefore, has not the vivacious, quick, progressive, active propensity of the choleric or sanguine, but is slow, pensive, reflective. It is difficult to move him to quick action, since he has a marked inclination to passivity and inactivity. This pensive propensity of the melancholic accounts for his fear of suffering and diffculties as well as for his dread of interior exertion and self-denial. He is pusillanimous and timid if he is called upon to begin a new work, to execute a disagreeable task, to venture on a new undertaking. He has talent and power, but no courage.[261]

[259] Hock, *op. cit.*, p. 45. [260] *Ibid.*, pp. 45-46. [261] *Ibid.*, pp. 46-48.

He has an inability to think fast under emotional stress, is characterised by suspiciousness, pessimism, hypocondria, and a tendency to nervous disorders:

If he is called upon to answer quickly or to speak without preparation, or if he fears that too much depends on his answer, he becomes restless and does not find the right word and consequently often makes a false and unsatisfactory reply. He is very suspicious, conjectures evil intentions and fears dangers which do not exist at all. Offenses, mishaps, obstacles he always considers much worse than they really are. The consequence is often excessive sadness, unfounded vexation about others, brooding for weeks and weeks on account of real or imaginary insults. Melancholic persons who give way to this disposition to look at everything through a dark glass, gradually become pessimistic, that is, persons who always expect a bad result; hypochondriac, that is, persons who complain continually of insignificant ailments and constantly fear grave sickness misanthropes, that is, persons who suffer from fear and hatred of men. Because melancholics take everything to heart and are very sensitive, they are in great danger of weakening their nerves. It is necessary, therefore, to watch nervous troubles of those entrusted to one's care. Melancholics who suffer a nervous breakdown are in a very bad state and cannot recover very easily.[262]

We conclude, then, from all this, that the endocrinologists in classifying the "hyposurrenal" temperament and attributing it to hypofunction of the adrenals, have simply given a new name and a more scientific explanation of the traditional "melancholic" temperament, attributed by the ancients and medievalists to an excess of "melancholia" in the blood.

5. The Hyper- and Hypopituitary Temperaments.

The pituitary gland is considered by endocrinologists to be perhaps the most important of all the endocrines because of the dominant influence which it exercises over the other endocrine glands and hence over the organism as a whole. As Dr. Loewenberg says:

While each of the endocrine glands is important and has a specific function to perform, yet none equals in importance the pituitary gland.

[262] *Ibid.*, pp. 48-57.

The pituitary gland may be considered the governing body of the entire endocrine system: its influence is manifested during the fetal stages and the various ages after birth. This influence is wielded by its hormones, some of which act directly upon the development and the functions of the body, while others activate various other endocrine glands so that their specific hormones may be elaborated in sufficient quantities to stabilize many of the functions of the body.[263]

The pituitary is also the most complicated of the endocrines as to anatomy, function and the effects of its numerous hormones. Without going into detail, we will simply indicate some of its outstanding features. As to anatomy:

The pituitary gland is a composite of four distinct structures: 1. The anterior lobe of the pituitary body (*pars anterior, pars glandularis, anterior hypophysis*). 2. The posterior lobe of the pituitary body (*pars posterior, pars nervosa, posterior hypophysis*). 3. The *pars intermedia* (the intermediate lobe). 4. The *pars tuberalis.*

Shape and size: The pituitary gland is a somewhat elliptoid, reddish gray body situated in the sella turcica of the sphenoid bone (at the base of the brain, a short distance behind the root of the nose), usually weighing about 0.8 gm., and measuring approximately 6 by 8 by 14mm. Under certain circumstances and in various people, the size and weight may fluctuate within narrow limits . . .

Physiology: The pituitary gland is considered as a unit only because of its gross appearance. Its component parts differ in their physiology as markedly as they do in their structures. Not only do the various lobes secrete different hormones, but each type of cell in the same lobe seems to be responsible for an individual hormone.[264]

To give some idea of the extent of the pituitary's influence and the complexity of its effects on the organism, we will give Dr. Loewenberg's summary:

The vital functions of the body that are either directly or indirectly influenced by the pituitary gland may be listed as follows: I. Sex Hormone Activity: (a) Maturation and fertilization of the ovum;

[263] Loewenberg, *op. cit.*, p. 68. [264] *Ibid.*, pp. 74-75.

(b) Retention of the ovum and its intrauterine development; (c) Aid in expulsion of the fetus from the uterus; (d) Development of the primary and secondary sex organs; (e) Development of sex function; (f) Control of lactation. II. Growth Hormone Activity: (a) Growth and development of the fetus; (b) Growth and development of the child into adulthood; (c) Skeletai growth; III Aid in the Control of: (a) Vascular tension; (b) Diuresis and antidiuresis (water metabolism); (c) Digestive system; (d) General metabolism; (e) Carbohydrate metabolism; (f) Fat metabolism; (g) Protein metabolism, etc. IV Controlling Influence Upon: (a) The Thyroid; (b) The Gonads (male and female); (c) The Adrenals; (d) The Parathyroids; (e) The Islands of Langerhans; (f) The Pineal; (g) The Thymus; (h) The Nervous System and most of the cells of the body.[265]

Of the seventeen hormones thought to be elaborated by the pituitary, only five have been isolated, the most important of which and the best known as to their effects, are a growth hormone and a sex hormone produced by the anterior lobe, to which, however, no specific names have yet been given. Of the thyrotropic hormone, whose specific function is the stimulation of the thyroid gland, Dr. Loewenberg says:

The existence of a thyroid stimulating substance in the anterior pituitary lobe has been proven and has been isolated in a sufficiently purified form for clinical use. Whether this is a true, independent hormone or only a by-product of the other well known pituitary hormones is still a question to be answered by further experimentation. The action of the so-called thyrotropic hormone can be elicted only in the presence of a thyroid gland; it has no effect after complete thyroidectomy or in the complete absence of thyroid activity.[266]

As to psychical effects of the pituitary, the impracticability of attempting to attribute particular psychical characteristics directly to this one gland becomes manifest when we consider the extensiveness and complexity of the physiological functions attributed to it and the dominating influence which it exerts over other glands. Still less feasible would it be to attempt to describe a distinct hyper- or hypopituitary temperament, at

[265] *Ibid.*, pp. 76-77. [266] *Ibid.*, p. 102.

least from the psychical aspect. Berman, referring to only one source of difficulty, i. e. the reciprocal antagonism thought to exist between certain functions of the anterior and the posterior lobes, says: "The presence of two antagonistic elements in the one gland complicates any attempt at even the most abstract analysis of a personality dominated by that gland." [267]

Hence a "type" of temperament based upon hyper- or hypofunction of the pituitary is hardly admissible, except, perhaps, on a morphological basis, since the effects on somatic growth, on configuration and on sex physiology are practically the only temperamental effects attributable directly to this gland. Other effects, especially those important in the determination of psychical characteristics, it exercises through the medium of its stimulating or inhibiting influence on other glands, especially the thyroid, and the psychical characteristics resulting therefrom are reducible to and should be assigned to types based upon hyper- or hypofunction of these individual glands themselves. In describing hyper- and hypopituitary types, the endocrinologists concern themselves chiefly with individual differences in somatic structure and primary and secondary sex characteristics, which pertain more to the morphological aspect of temperament. The psychical characteristics they describe as accompanying hyper- or hypopituitary morphological types are almost identical with those attributed to hyper- or hypofunction of the thyroid and evidently result from the stimulation or inhibition of this gland by the thyrotropic hormone of the pituitary.

So intimately are these two glands connected in their determining effect upon temperamental individuality, especially on the psychical side, that some endocrinologists use the terminology "hyperpituitary-hyperthyroid" or "hypothyroid-hypopituitary" temperaments. For example, Pende says: "In our enumeration of constitutional endocrine types we have placed side by side and almost identified the hyperthyroid and hyperpituitary constitutions, since it is practically impossible to separate the pure hyperpituitary constitution from a hyper-

[267] Berman, *op. cit.*, p. 243.

thyroid component."[268] In describing the psychical feature of his "hyperpituitary-hyperthyroid" type, he says: "There is a tendency to psychic unrest due to mental excitement and hyperemotivity, but with dominion of logic over passions. The intelligence is usually well developed."[269] Berman, describing the same type, says:

High-grade brains, the ability to learn, and the ability to control, self-mastery in the sense of domination of the lower instincts and the automatic reactions of the vegetative nervous system, the rule by the individual of himself and his environment, are at their maximum in him. Men of brains, practical and theoretical, philosophers, thinkers, creators of new thoughts and new goods, belong to this group.[270]

Describing the type based upon hypofunction of these two glands, Pende says:

We find in the hypothyroid (or hypothyroid-hypopituitary) variety an apathetic, slow character, hypoevolute intelligence, marked especially by a lack of critical faculty, with predominance of concrete over logical thought.[271]

Hypopituitary—the intellectual development is slightly backward, and the character is capricious. In both sexes we find muscular asthenia low blood pressure and a slow pulse, psychic torpor, apathy, mental puerilism, lack of concentration, occasionally impulsiveness and deficient moral sense.[272]

Berman notes of this type:

Among these types are included subjects of obsessions and compulsions who are dull and apathetic, cannot learn or maintain inhibitions, and so, without initiative, evolve into moral and intellectual degenerates.[273]

Pituitary inferior subnormal temperature, blood pressure and pulse. Mentally sluggish, dull, apathetic, backward.[274]

It is evident from this that the hyperpituitary and hypopituitary types are practically the same, at least from the psy-

[268] Pende, *op. cit.*, p. 67.
[269] *Ibid.*, p. 232.
[270] Berman, *op. cit.*, p. 246.
[271] Pende, *op. cit.*, p. 80.
[272] *Op. cit.*, p. 233.
[273] Berman, *op. cit.*, p. 244.
[274] *Ibid.*, p. 247.

chical aspect, as the hyperthyroid and hypothyroid types. However, Berman, as we have noted before, would attribute to the pituitary some sort of direct action upon the brain and the mentality, although he fails to state which of the seventeen pituitary hormones are supposed to produce these effects. In the following statement, he practically admits that this is only a supposition, not the proven data of empirical observation and experimentation: "So while the thyroid raises the energy level of the brain, the whole nervous system, as a by-product of its general awakening effect upon all the cells of the body, the pituitary probably stimulates the brain cells more directly, perhaps in the manner of caffeine or cocaine." [275]

With regard to the corresponding type classification of the ancients and medievalists, the conclusion is evident. The hyper- and hypopituitary temperaments of the endocrinologists, since they are reducible, on the psychical side, to the hyper- and hypothyroid temperaments, correspond in the older classification to the two temperaments which we have pointed out as being synonymous with the hyper- and hypothyroid temperaments, namely, the "choleric" and the "phlegmatic."

6. *The Hyper- and Hyposexual Temperaments.*

The sexual organs or gonads, besides determining the primary and secondary sex characteristics, i. e. the differentiation of "male" and "female," and the accompanying morphological features peculiar to each, such as bone structure, body configuration, fat distribution, voice qualities, etc., have, of course, as their primary function, reproduction, with all its necessary physiological concomitants. The gonads accomplish their functions by means of both external secretions (ova and spermatazooa), and certain internal secretions produced in what are called the "interstitial cells" of the sexual organs. The internal secretions are supposed to be responsible for the secondary sex characteristics and to assist in various ways in the whole process of reproduction. They are considered to be the chief

[275] *Ibid.*, p. 70.

physiological factors in what the moderns call "libido" or sex urge, and "potentiality." Their pathological malfunction is responsible, say the endocrinologists, for certain sex anomalies such as eunuchoidism, pseudohermaphroditism, precocious or retarded sex maturation, excessive or defective "libido" and "potentiality," and possibly of some types of sex perversion.

Hyper- and hypofunction of the gonads is intimately connected with and, to a great extent, determined by hyper- or hypofunction of certain other endocrine glands, particularly the pituitary and adrenals. Speaking of this interrelation, Dr. Loewenberg says:

> Gonad development and function are dependent upon the gonadtropic hormones of the anterior pituitary body. The anterior pituitary body through its hormones, stimulates libido and potentiality, incites ovulation and menstruation.[276]
>
> Since the gonadtropic hormone influences the growth, development and function of the gonads, any deviation from the normal will secondarily affect these structures.[277]
>
> There appears to be a definite interrelationship between the suprarenal cortex and the gonads. Much of this relationship, judging from the experimental data obtained by competent experimental physiologists is mediated through the hypophesis (anterior pituitary lobe).[278]
>
> As an example of glandular interrelationship we may cite that existing among the adrenal cortex, the anterior pituitary body and the gonads. The adrenal cortex in many ways owes its function to the anterior pituitary body which possesses among its many hormones an adrenotropic principle. Most likely the anterior pituitary body exerts its influence upon the gonads, both through the adrenal cortex and directly by its gonadtropic hormone, because the removal of either the anterior pituitary or the adrenal cortex causes loss of libido and potency with atrophy of the gonads.[279]

The designation of a type of temperament based upon hyper- or hypofunction of the gonads has reference principally to morphological characteristics and even here is confined to a

[276] Loewenberg, *op. cit.*, p. 614.
[277] *Ibid.*, p. 91.
[278] *Ibid.*, p. 616.
[279] *Ibid.*, p. 535.

limited but very fundamental sphere, i. e. somatic features resulting from sex differentiation and greater or less sexual and reproductive capacity. Even from the morphological aspect it would seem that sex characteristics are qualities too fundamental to justify the construction of a type of temperament upon them—they are basic concomitants of all types. However by the delineation of hyper- and hyposexual temperaments, the endocrinologists apparently intend simply to point out the fact that physiologically some men are more "male" than others and some women more "female" than others.

In the psychical sphere, there are, of course, some notable differences between males and females in general, especially in the affective zone, differences which undoubtedly have as their foundation, at least to some degree, the basic physiology peculiar to each sex. But it would seem that the chief, though perhaps less basic, cause of differences in psychical characteristics between the sexes would be due to the entirely different psychological "environment" to which each sex is ordinarily subjected, i. e. their education in and preoccupation with different phases of human activity, their different status and function in society, etc. In other words, psychical differences associated with sex differentiation would be classifiable, to a large extent, as differences of "character" rather than of temperament, though of course the physiological and morphological differences would be the basic cause of men and women being subjected to different psychological environments. Common observation shows that when women are subjected to "masculine" types of activity, education, occupation, etc., they tend to develop characteristics usually more predominant in men; i. e. independence, aggressiveness, etc.

But within each sex, the greater or less predominance in different individuals of characteristics peculiar to that sex might be a justifiable basis for the designation of certain types as "hypersexual" or "hyposexual," especially in the morphological sphere. However, the psychical characteristics which the endocrinologists depict as accompanying hyper- and hyposexual temperaments are practically identical with those attri-

buted to hyper- and hypofunction of other endocrine glands, especially the adrenals. Thus Pende, who prefers the terms "hypergenital" and "hypogenital" to "hypersexual" and "hyposexual," says:

> In the hypergenital variety we find an expansive, euphoric character, a lively imagination and mediocre intelligence of realistic type.[280]
>
> In the hypogenital variety we find a depressed character, a mind either of childish or of hetero-sexual type and hypoevolute intelligence.[281]

The explanation of why hyper- and hyposexual types display psychical qualities characteristic of hyper- and hyposurrenal types is not hard to find when we bear in mind the relationship existing, as noted above, between the pituitary, adrenals and gonads. Adrenals and gonads tend to hyper- or hypofunction together, because of the peculiar interplay between the adrenotropic and gonadtropic hormones elaborated by the pituitary. Hence hyper- or hypofunction of the gonads is accompanied by psychical qualities characteristic of adrenal hyper- or hypofunction, not that the gonads themselves produce these effects but that their hyper- or hypofunction is merely a concomitant of that which does produce these effects, namely hyper- or hypofunction of the adrenals. Hence hyper- and hypofunction of the gonads should not be considered as a basis for the postulation of a particular hyper- or hypo- temperament but simply as an accompaniment of hyper- or hyposurrenal temperaments. Thus from the viewpoint of psychical characteristics, the types denominated by the endocrinologists as "hypersexual" and "hyposexual" are easily reducible to the hyper- and hyposurrenal types and consequently to the corresponding "sanguine" and "melancholic" types in the traditional classification.

The ancients and medievalists were well aware of the interrelationship between sex, temperament and psychical qualities. St. Thomas, for instance, commenting on Aristotle, attributes

[280] Pende, *op. cit.*, p. 80. [281] *Ibid.*

the inconstancy of women to their temperament: "Accordingly, since woman, as regards the body, has a weak temperament, the result is that for the most part, whatever she holds to, she holds to it weakly; although in rare cases the opposite occurs."[282] Inconstancy, when found in men, was also due to temperament: "A man fails to stand to that which is counselled because he holds to it in weakly fashion by reason of the softness of his temperament, as we have stated with regard to women."[283] Greater or less "libido" was also an effect of temperament:

By temperament, some are more prone than others to desire (*concupiscentiae*).[284] For some are disposed from their own bodily temperament to chastity.[285] Now that which is on the part of the body is merely an occasional cause of incontinence; since it is owing to a bodily disposition that vehement passions can arise in the sensitive appetite which is a power of the organic body.[286]

Even sex perversions might be included in the following and attributed to temperament:

Some pleasures are in conformity with nature, and some are against nature. Some of those that are not in conformity with nature are pleasurable on account of the vicious nature, as, for example, in some men who have corrupted and perverted temperaments. On account of this such persons develop perverse imaginations and affections. For the sensitive functions need the cooperation of the body, and the body acts in conformity with the nature of the temperament.[287]

Hence, while the older scholars did not designate a particular type of temperament based upon the sex element, they nevertheless considered greater or less predominance of that element as an accompaniment of certain other temperaments, which is actually what the stand of the endocrinologists in the matter can be reduced to.

[282] *Summa Theol.*, II-II, q. 156, a. 1, ad 1um.
[283] *Ibid.*, ad 2um.
[284] *II Cont. Gent.*, 63.
[285] *Summa Theol.*, I-II, q. 51, a. 1.
[286] *Ibid.*, II-II, q. 156, a. 1.
[287] *In VII Ethic.*, lect. 1.

7. Other Endocrine Glands.

With regard to other glands which are generally considered by most authorities as having some endocrine function, it is hardly possible to consider these as forming a basis for particular types of temperament, either because their known functions are too limited in scope or too transient to exert any appreciable influence upon the general temperamental disposition of the body and the psychical make-up, or because, if they do exert some influence, the psychical qualities resulting therefrom coincide with and are easily reducible to those of other types. Their hyper- or hypofunction might be responsible for certain variations or modifications found in other types, but their effects are not characteristic enough to differentiate a particular type of individual.

The *parathyroids*, for instance, control lime metabolism in the body and exert some influence upon muscle and nerve excitation. Their abnormal hypofunction is said to cause certain organic nervous diseases and bone malformations. Some endocrinologists describe a "subparathyroid" type, characterized by irritability and emotional instability, which is practically identical with the hyperthyroid type. The ability of some children, and occasionally of adults, to form unusually vivid and detailed picture-images of things seen in the past, the "eidetic phenomenon" of Jaensch, may be, say some endocrinologists, an effect of lime deficiency brought about by parathyroid hypofunction, although it might also be attributable to thyroid hyperfunction. As Berman says, "Both hyperthyroidism, excessive activity of the thyroid, or subparathyroidism, insufficient activity of the parathyroid, may cause a loss of lime salts from the body which is responsible for the peculiar nerve condition that makes for the eidetic phenomenon."[288]

The pancreas, beside its external secretion, the pancreatic juice, so necessary to good digestion, elaborates in the "islets of Langerhans," an internal secretion, "insulin," whose chief function is the regulation of carbohydrate metabolism. An

[288] Berman, *op. cit.*, p. 266.

insufficiency of this hormone may produce diabetes, the condition resulting from an excess of sugar in the blood. Since sugar produces a general energizing effect upon the organism, any undue under- or oversupply of it has an important bearing upon the general psychical tone, as we noted when considering the hyper- and hyposurrenal temperaments. But other glands besides the pancreas play an important part in carbohydrate metabolism and in the mobilization and utilization of energy. Hence any psychical characteristics observed to accompany hyper- or hypofunction of the " islets of Langerhans " may not be attributable to that gland alone and, at any rate, from the psychical viewpoint, any characteristics resulting from deficient or excessive sugar in the blood are usually included as phases of other temperaments, particularly of the surrenal temperaments.

As to the thymus, located just below the thyroid and described by some endocrinologists as a gland of internal secretion, Dr. Loewenberg says:

> Notwithstanding the intensive researches which have been made and are still being carried on in many quarters, its ability to elaborate a specific hormone has not yet been definitely established. As to the specific function of the thymus in relation to growth, development and metabolism, there exist many controversial opinions based on similar experimental data.[289] Knowledge of its function, notwithstanding extensive researches, it still vague even to the moderns.[290]

Hence any attempt to describe a " hyper- " or " hypothymic " temperament would be obviously premature.

With regard to the pineal gland, a brain appendage regarded by the ancient Hindus and later by René Descartes as the " seat of the soul," while some evidence exists as to its elaboration of an internal secretion, Dr. Loewenberg says, " We must confess our total lack of knowledge of the influence of this internal secretion in the body and, particularly, we must point out that the hypothesis that the secretion plays a role in the

[289] Loewenberg, *op. cit.*, p. 399. [290] *Ibid.*, p. 250.

development of puberty is, to date, completely without significant evidence." [291]

This whole section might be summed up by saying that the four types of temperament designated by the endocrinologists as hyperthyroid, hypothyroid, hypersurrenal, and hyposurrenal, to which correspond respectively the choleric, phlegmatic, sanguine, and melancholic temperaments of the ancients and medievalists, are the only ones extensive enough and distinctive enough to merit the name of "type," and that any psychical characteristics that might be attributable to other endocrine glands are easily assignable to these four types. Moreover it is safe to say that any future "types" which may be evolved from a better knowledge of the endocrine glands will also be reducible, on the psychical side, to these four, since they run the whole gamut of fundamental psychical qualities.

Hence it is evident that the endocrinologists have not added and will not add anything substantially new to the observations of the ancients and medievalists as to "type" classification and the assigning of particular characteristics to each type. We have, then, one more indication of the fundamental similarity between the hormonal and humoral theories of temperament and, incidentally, further evidence that the older scientists did not always proceed in quite such an *a priori* manner as some moderns would like to think.

IV. The Endocrinal Theory of Temperament and Aristotelian-Thomistic Psychology

The endocrinologists, we recall, started out on their study of individual personality with a notion that man must be, in some way or other, a "whole," and that any attempt to explain his personality must be made from a "whole making" point of view. Their interest in this "personalistic" aspect of human life was aroused by the unmistakable evidence which they encountered in their work as physicians, psychiatrists, and anthropologists, that man functions in a unified manner, that all his

[291] *Ibid.*, p. 48.

activities, physiological, emotional, intellectual or whatever way one might classify them, are in some manner or other, so interrelated that one type of activity cannot take place without setting up repercussions in all the other types, moreover, that the individual man is characterized by an individual, personal way of reacting physiologically, emotionally, intellectually.

They then set out to determine, by means of empirical investigation, the basic cause of this remarkable unity and individuality in man's functioning. Having accumulated, by much painstaking experimentation and observation, a great mass of empirical data with regard to man's physiological, emotional, and mental operations, they concluded that the unification so apparent in his functioning is due to the fact that man himself is simply the sum-total of his morphology, temperament and character, three closely interrelated "sides" of man which, taken all together, constitute the "whole" man. The next step was to determine the basic cause of morphology, temperament, and character, i. e., to discover the chief factor responsible for the characteristic shape and size of an individual's body, the peculiar structure and functional disposition of his organs and the individuality of all his mental and emotional characteristics. Because of the great influence which the secretions of the endocrine glands were observed to exert on these three "constituents" of the whole, it was decided that these chemical compounds are the chief determinant of morphology, temperament, and character, inasmuch as they are the chief determinant of the individual structure and functional disposition of all bodily organs, which structure and functional disposition are, in turn, the cause of the individual morphological build and psychical make-up. The "whole" man—the sum-total of these three constituents—is, therefore, simply the total product of the combined chemical activities of his hormones. He is a homogeneous unit, composed entirely of matter. Not only his body, but his thoughts and emotions as well, are the products of material, chemical reactions instigated by his endocrine secretions. With such a concept of man as a starting point, it is not surprising that Berman, for instance, should conclude, as noted

before, that: "The soul was once a subtlety of metaphysics. Now when mind appears soaked in matter, saturated with chemicals like the hormones, therefore woven out of material threads, the independent entity created out of intangible spirit flies like a ghost at dawn."

Now the question presents itself: how is it that from substantially the same empirical data as to the effect of organic dispositions on psychical activities, men like Aristotle and St. Thomas should have arrived at conclusions so totally different from those of the endocrinologists as to the nature of man and his operations? How is it that the theory of the humors as the chief determinant of man's individual characteristics could have led its proponents to the conclusion not only that man has a spiritual soul, but that a spiritual soul is the very form of man, while the theory of the hormones has led some of the endocrinologists to the conclusion that man cannot possibly have a spiritual soul since he is composed entirely of matter? The answer is, of course, that Aristotle and St. Thomas realized that man himself is something quite different from the phenomena which he exhibits and hence that empirical investigation alone is not sufficient to arrive at a knowledge of man's nature, but must be combined not only with a careful analysis of the evidence offered by man's own consciousness but with a process of accurate reasoning downward from self-evident first principles.

The chief reason, then, why the empirical investigation of the endocrinologists has failed to disclose the nature of man's "wholeness" and the nature of man himself, is the fact that it is concerned only with the accidental qualities inherent in man, and not with man himself. The endocrinologists contend, of course, that such distinctions pertain to philosophy, not to science, and that they are not concerned with a philosophical explanation of man, but only with those things about him which can be accurately determined by empirical observation and experimentation. Nevertheless, they profess the desire and intention of arriving at a knowledge of the "whole" man, and they even attempt to explain the "whole" man in terms of

empirical data. This is, of course, from our point of view, a contradictory position. Either they must abandon all attempts to arrive at a knowledge and to give an explanation of the "whole" man and confine themselves solely to an investigation of his phenomenal aspects, or else combine their scientific data with those philosophical principles by which alone the intrinsic nature of man can be understood and accounted for. If they choose the first alternative, they must refrain from all speculation as to what intrinsically constitutes man, and particularly they must refrain from denying things about him which can neither be affirmed nor denied on the basis of empirical data alone.

Yet to confine themselves to this purely empirical type of investigation would be a great pity, because a knowledge of the intrinsic nature of man would, as we have said before, give direction and orientation to their empirical investigations. It would supply them with some degree of foreknowledge, so to speak, of what they might expect to find in their observations and experiments, with a better appreciation of the interdependence among the various kinds of functions which the "whole" man performs and would serve as a check and a norm by which to evaluate their experimental findings. Especially, it would save them from that purely materialistic concept of man from which flow so many grave and far-reaching errors.

Moreover, an understanding of man's nature would be of practical value to them in their work as physicians, psychiatrists, etc. True, a philosophical knowledge of man's constitution would not, of itself, enable them to cure this or that bodily or mental disease; nevertheless, it would furnish them with a psychological insight into their patient which would be a distinct advantage in the diagnosis and treatment of many types of pathology. It would enable them, for instance, to appreciate better the value of mental and emotional symptoms as indicators of particular types of organic and functional disorders. A better appreciation of even the physiological unity of man would be a great aid to them in determining what specific remedy would be here and now safest and most effective.

Thyroxin, for instance, might be a specific for this or that type of thyroid malfunction, but the patient's constitution as a whole must be taken into consideration before it can be safely administered. It might have very undesirable effects on other systems and organs in the body, on the nerves, heart, blood pressure, etc., because of the individual's peculiar physiological make-up as a whole. It might induce, moreover, mental and emotional states which would only aggravate the patient's condition, because of his constitution as a whole. Examples of this kind might be multiplied indefinitely.

Another reason why it would be a pity for the endocrinologists to confine themselves to a mere empirical investigation of man is the fact that, were they familiar with the doctrines of true philosophical psychology and with some of its presuppositions, they would be in an excellent position, by reason of their technical knowledge of the human organism and its functioning, to render real service to this branch of philosophy by contributing not a little to a better understanding and appreciation of the body-soul relationship, which is, after all, the key question in psychology. They have already a great advantage over the majority of modern scientific psychologists in that they have an appreciation of at least the fact of the "wholeness" of man and the unity of his nature and are convinced of the necessity of studying the whole man from a "whole-making" point of view. The failure to grasp these notions is one of the chief reasons why so much of modern psychology has gone awry.

One of the chief difficulties which would confront these men in the acceptance of that psychological doctrine which alone has been able to give an adequate and complete account of man's nature (i. e., Aristotelian-Thomistic psychology) would be, as we have noted before, the conviction that since Aristotle and St. Thomas and the other ancients and medievalists from whom they borrowed much of their physiological doctrines, were hopelessly inaccurate in their observations and interpretations of physiological phenomena and were, in fact, wrong in many of their particular conclusions, they could not possibly

have arrived, even with the most impeccable reasoning, at a true interpretation of man's nature. We have attempted to furnish some evidence whereby such misconceptions might be corrected, by showing not only that these men were substantially correct in basic notions of physiology, but, more specifically, that their humoral explanation of man's physiological and psychical individuality bears a remarkable fundamental similarity to the endocrinal explanation and was, in fact, the embryo from which the whole science of endocrinology developed.

We will now attempt to give, in a way which might be comprehensible to the endocrinologists, a summary idea of some of the more basic notions upon which the Aristotelian-Thomistic psychology is built, as well as an indication of some of the presuppositions upon which it rests. We will also attempt to indicate, at the same time, how this psychology and its presuppositions not only render the data of endocrinology intelligible, but furnish an ultimate and adequate explanation of man himself, of his nature, and his individuality. Such an attempt to present a thumb-nail sketch, so to speak, of Aristotelian-Thomistic psychology, especially to men unfamiliar with its terminology, labors, of course, under many difficulties, not the least of which is the fact that the psychology of Aristotle and St. Thomas is, to a great extent, based upon and presupposes their cosmological and metaphysical doctrines, doctrines with which, of course, the endocrinologists are, for the most part, unfamiliar. However, it would seem that the only feasible way to introduce these men to such ideas as *matter* and *form*, in the technical sense, *substance* and *accidents*, etc., is by showing them how these things are realized in man, and how man can arrive at a knowledge of them by the use of his senses and his reason. Moreover, it would seem better to omit, in such a presentation, some of the more detailed doctrines, until some of the more general features of the doctrine as a whole have been grasped.

To explain, at least in technical detail, such things as the real distinction between the soul and its powers, that the soul is not immediately operative, etc., would only cause confusion,

as would insistence on the fact that when a Thomist speaks of the soul as the form of the body, he really means the form of the prime matter of the body. It would seem that the first and most important thing to be impressed upon the endocrinologists is the fact that man is one, complete, living, sensing, understanding, substance, composed of two incomplete, entirely different substances, a material body and a spiritual soul. This fact makes him something unique in creation, something quite different from the phenomena which he exhibits, and something specifically distinct not only from plants and animals, but from non-living matter as well, facts which not all endocrinologists are willing to admit. On the other hand, a summary presentation of such matters runs the risk of becoming an inadequate presentation and the avoidance, as much as is possible, of technical expressions and technical explanations can easily give rise to misinterpretations, due to the manifold meanings and connotations which have come to be attached to words used in common parlance. However, it would seem that attempts in this direction must be made if we are to present our philosophy to those unfamiliar not only with philosophical terms but with philosophical ideas. The following paragraphs are, therefore, merely a suggestion of how one might proceed in familiarizing the endocrinologists with the substance of our psychology and with some of its presuppositions.

* * *

If the data of endocrinology manifests anything about man, it is that he operates as a unit. If the activities of his endocrine glands can exert a profound influence not only upon his major physiological processes such as metabolism, nerve activity, respiration, and reproduction, but also upon all his mental and emotional processes as well, this could only be because all these various types of activity constitute phases of a total activity flowing from man as a whole. Emotional states such as anger and fear could not cause a release of adrenalin nor could a release of adrenalin cause a speeding up of blood pressure, heart beat, and muscle activity, as well as an intensification

of mental processes, unless all these activities were so joined together in man as to form all together a unified operation. If, then, as endocrine data so clearly indicates, no one type of activity takes place in man without influencing all the other types, it is evident that man does operate as a unit.

Since, therefore, man operates as a unit, he must be, in himself and by reason of his very nature, a unit, for universal experience demonstrates the fact that a thing operates according to its nature, and the mode of its operation indicates the mode of its being. It would be impossible for a thing to produce a type of activity contrary or in any way disproportionate to its nature, for the nature of a thing is the principle, the source from which its operations flow. In other words, a thing acts as it does solely because it is what it is. The unification so apparent in all the activities flowing from man's nature, demands, therefore, and presupposes unity in man's nature. Moreover, even without a detailed knowledge of the unification existing among his various operations, man, in the very exercise of at least his conscious activities, has some awareness of the fact that he is an integer.

But to really understand the unity of man's nature, we must know how and why he is a unit, and what kind of unit he is. By reflection upon himself and his activities, man can perceive that, although he operates as a unit, he himself is something quite distinct from his own operations, for these constantly change, come and go, succeed one another in an endless procession, but he himself remains the same individual throughout life. His operations produce many changes in him; they cause him to grow and develop physically and mentally, yet he is conscious of the fact that as a full grown man he is still the same person that he was as a child. Nothing is more obvious than the transitoriness of his emotional activities, for instance, yet he is always the same person who is now angry, now calm, now loving, now hating, now fearing, now hoping. Now he is exercising one type of activity, now another, or now he ceases to exercise some types of activity altogether. At one time he is walking, at another resting, now thinking, now sleeping, yet

always it is the same individual who performs all these transient activities. If, therefore, he himself is something permanent, his operations something transient, he himself must be something distinct from his operations.

Though he himself is distinct from his operations, nevertheless it is evident to him that his operations are so related to himself that they cannot take place outside of himself, they have no existence except in him. His thinking, for instance, does not go on when he stops thinking, nor his walking when he sits down. His operations, therefore, are accidents, things which have no existence in themselves or of themselves, but only in something else, only in some subject, upon which they depend and in which they inhere. But man himself, the subject of these accidents, is a substance, that is, something that does exist in itself and by itself and not in something else as in a subject, something that "stands under" and supports the accidents which inhere in it.

This same relationship that exists between man and his operations, exists also between man and all his qualities, whether of body or mind, for the qualities of man have no existence outside the man himself. They have their being only in him whose qualities they are; he is the subject upon which they depend and in which they inhere. The shape and size of his body, the disposition of his organs, his emotional and intellectual characteristics, are all things that have no existence except in the man himself; they are accidents inhering ultimately in the substance man, and he is the subject which underlies and supports all these qualities.

Man is, therefore, by his very nature, not only one thing but one substance, one substantial thing, and his unity is the unity of a substance, a substantial unity. Hence man himself cannot consist of a mere aggregate of his operations, for his operations, are accidents and no aggregate of accidents can ever constitute a substance. Substance and accidents are two essentially different things. Neither can the substance, man, consist in the sum-total of his physical and psychical qualities, for they too are only accidents inhering in man and presupposing man as

their supporting subject. Hence morphology, temperament, and character cannot be the constituents of man himself nor of man's nature, for they are merely dispositions of his body and his mind, accidents, therefore, inhering in man but incapable of constituting him. They may be the constituents of his personality, if we mean by personality the sum-total of all his accidental individual characteristics, but they cannot be the constituents of the substance man himself.

To say that man is by nature one substance, does not of itself tell us much about what particular kind of thing man is, or what particular kind of nature he has. Any one thing that exists in itself and not in another as in a subject, is one substance—a stone, for instance, or a tree, or a dog. We want to know what kind of substance man is. When we have determined this, we will know a good deal more about man himself and his nature. Since the nature of a substance is manifested by its operations, to learn more about the nature of man, we must investigate more in detail the operations which he performs, whether these be automatic, as his physiological operations, or conscious and deliberate, as his sensory and rational operations.

To start, then, with man's physiological operations, the most obvious thing about these is that they are vital operations, i. e., the activities of a living thing. We recognize a thing as living if it manifests self-motion, or motion from within, i. e., if it grows and develops, preserves, perfects, and ultimately reproduces itself by means of a series of internal activities produced by parts or organs which act upon and move each other in such a way that the joint activities of all together conduce to the preservation and development of the whole thing. This is why we call a living thing an organism, something composed of parts or organs, each of which, by means of its operation, contributes something to the well-being of the whole.

Moreover, while in a living thing a certain amount of balance or equilibrium must be maintained among the various phases of the total activity, nevertheless this total activity is really the result of a lack of rigid equilibrium among the various parts or organs, a lack which induces a mutual interaction among the

organs, whereby one organ initiates, stimulates, or retards the activities of other organs for the efficient production of the total activity necessary for the welfare of the organism as a whole. A living thing lacks a rigidly stable equilibrium among its various organs because the preservation and well-being of the organism as a whole demands a great amount of adaptability on the part of the organs in order to meet the ever changing requirements of the organism resulting from the various conditions and circumstances in which it finds itself. This adaptability to meet changing circumstances is one of the chief characteristics of a living thing. In the human organism, it is particularly conspicuous in the function of the endocrine system, as we have seen.

Another characteristic of a living thing is that in it, non-living matter, such as chemical elements and compounds, is elevated to the performance of vital activities such as nutrition, growth and reproduction, activities of which chemical elements and compounds are incapable as found in their natural state outside of an organism. Here we have evidence of the existence in living things of some vital principle, some sources of life which so dominates, directs, and elevates chemical and physical forces as to render them capable of performing functions of a higher order than they themselves are naturally capable of. Without such an elevation, in the case of animals and men, the ability of hormones, for instance, mere chemical compounds, to contribute essentially to such vital operations as metabolism, nerve activity, ovulation, spermatization, etc., would be entirely inexplicable. Metabolism, for example, that wonderful process wherein a certain permanence in the shape and identity of bodily organs and of the whole organism is maintained despite a constant change of matter, is a type of activity which has no counterpart in non-living things, and one which clearly evidences the presence of a vital principle capable of elevating non-living chemicals to the performance of vital activities. Of the role played by this vital principle in the higher activities of man, we will see more later.

These, then, are the essential characteristics of a living thing

with self-movement, or movement from within, resulting from a lack of rigid equilibrium of parts and productive of the total activity necessary for the preservation, development, and reproduction of the thing itself, a self-movement directed by a vital principle capable of elevating non-living matter to the performance of vital activities. These characteristics constitute the criteria by which living things can be distinguished from non-living things. They are totally lacking in non-living things, in atoms of non-living matter, for instance. The parts of an atom, nucleus and electrons, when stimulated from without, react on each other and move each other to produce an element or a compound with a more perfect activity than that of which they themselves, considered as individual parts, are capable, but this activity never passes beyond the limits of mere mechanical force. It never becomes a vital activity productive of growth and self-reproduction in the atom, nor is it capable of a great adaptability to meet changing conditions. The equilibrium between nucleus and electrons is a rigidly stable equilibrium derived from the very structure of the atom itself. It is by reason of the very rigidity of equilibrium between its parts that the atom is unable to move itself, or to alter the motion impressed upon it from without. There is in the atom no constantly maintained lack of equilibrium productive of a series of internal activities which result in the development and reproduction of the atom itself nor is there any elevation of mechanical forces to the performance of a type of activity higher than mere mechanical action. Hence the atom performs no vital activities and is, therefore, a non-living thing.

The same is true of chemical elements, which by reason of a stable equilibrium of their parts are incapable of moving themselves from within for their own self-development and self- reproduction. They merely react in a uniform, mechanical way, according to their particular natures, to stimuli applied from without. They have no organs nor are they capable of adapting themselves by reason of a labile equilibrium of parts to changing conditions. It is only when they have been incorporated into a living thing that they become capable of vital activities.

Man's physiological activities, then, are vital activities, since they are the activities by which man nurtures himself, grows and reproduces his kind. Since, therefore, man performs vital activities, he must be not only one substance, but one living substance, endowed with an intrinsic principle of life, hence differing radically and essentially, both in his being and in his operations, from all non-living things. Therefore neither he himself nor his activities, not even his physiological activities, can be the products of mere physical forces or chemical reactions. If chemical compounds such as the hormones can produce vital operations in man, it is only because they have become parts of his organism and have thus come under the domination, direction and elevating power of the principle of life within him.

But man's operations are not confined to mere physiological activity. He is conscious of the fact that he performs another type of activity which differs in many respects from physiological activity, viz., the activities of his senses. By a little introspection, he can perceive that it is by the activity of his external senses, sight, touch, hearing, etc., that he first becomes aware of the existence of his own body, and of other material objects. He acquires this knowledge by reason of the fact that his senses apprehend sensible qualities of these extra-mental objects, their color, their shape, their sound, etc. When he sees an apple, for instance, he is aware of the existence of the apple because sensible qualities of the apple have gotten into his consciousness, although obviously the apple itself, together with its qualities, remains as it was outside of himself. The very same qualities that are in the apple and that remain in the apple, have, therefore, acquired. in his sense consciousness, a new kind of existence, a psychical existence, a unique type of existence which is realized nowhere but in a knowing subject. The new existence which the qualities of the apple have acquired in the knower is to some degree an immaterial existence, for it involves a reproduction, so to speak, of the material qualities of the apple, but without the matter in which those qualities inhere as they are in the extramental apple. Yet it is

not a purely immateral existence, because it is limited to the material qualities of a particular concrete apple, and is brought about, as we shall now see, by the activity of material organs.

The medium through which the eye is brought into contact with the color of the apple is the image or representation of the apple which is impressed upon the retina of the eye. Through the medium of this retinal image, the eye, by means of its sensory operation of seeing, apprehends the color of the apple, and man, the knower, has acquired at least an incomplete sense knowledge of that color. But before he can perceive the apple, i. e. before his sense knowledge of the color of the apple is really complete, the visual sensation beginning in his retina must be relayed along the nerve tracts leading to the brain. More precisely, they go to that particular group of brain cells located principally in the cortex of the brain, which constitute the organ of what is called in Aristotelian-Thomistic psychology, the " common or central sense," an internal sense by whose function the knower becomes completely aware of the fact that he is sensing something and is enabled to distinguish the sensation of one sense from that of the others.

Fundamentally the same process takes place when man apprehends the other sensible qualities of the apple, by means of other external senses, its sweetness, for instance, by the sense of taste, its smoothness, by the sense of touch, etc. When he touches the apple, for instance, the peripheral nerve endings in the " touch spots " of his fingers receive an impression of something soft and hard and this tactile sensation is relayed along the nerve tracts to the organ of common sense, and he becomes fully aware that he is touching something and that the thing he is touching is hard or soft, as the case may be. This process of sensation with regard to the external senses has, in general, been amply verified by modern experimental data, although the exact location within the brain of the particular cells which constitute the organ of central or common sense has not been definitely determined, nor, in fact, is the term " common sense " generally used by the moderns.

Moreover, man is conscious of the fact that, besides the

activities of the external senses and the internal common sense, he is capable of another type of sense cognition which does not arise here and now from the operations of the external senses. He can close his eyes, for instance, and imagine the color and shape of an apple which he does not see, or he can recall an image of an apple which he saw yesterday or last week. This is sense knowledge, to be sure, but obviously not a knowledge which arises here and now from the activity of the external senses, for he is not employing these in the present instance. This type of sense cognition must take place, then, solely within the brain organ, by means of an image formed in that group of brain cells which constitute the organs of imagination or of sensory memory as the case may be, for there can be no other explanation of the presence of the sensible qualities of the apple in his consciousness when he is not employing his external senses. The formation of internal images by the memory and imagination can be easily verified by the simple experiment of closing the eyes and remembering or imagining some object. The presence of an internal image of the object can be detected. The data which the image produces was acquired originally by external sense cognition, but here and now the image is formed independently of the activities of the external senses. Another indication that the internal senses employ organs located in the brain is had from the fact that lesions in certain sections of the brain, due to injury, disease, etc., result in a complete or partial inhibition of memory or in derangements of the imagination.

The cognitive operations of the external and internal senses are, therefore, material operations, performed in and by means of material organs and involving molecular changes in nerves, brain cells, etc. Nevertheless they are at the same time at least quasi-spiritual operations because by means of them, the material qualities of extramental objects acquire a unique, quasi-immaterial, psychical existence in man's consciousness. Hence the senses are capable of a type of activity definitely higher than purely physiological activity.

Yet sensory activities presuppose and depend upon physio-

logical activity, since they are the operations of organs which were formed by physiological activity and which depend upon physiological activity for their nourishment, development, and functional efficiency. Hence it is not surprising that the quality of sensory cognitive operations should be determined to a great extent by the structure and functional disposition, the temperament, in other words, of the organs themselves. A better physiological disposition of the organ of imagination, for instance, is conducive to the formation of clearer and more complete images and hence to better imaginative qualities. This explains why better or worse imagination and memory can result from better or worse endocrine function, for endocrine function is, as we have seen at length, the chief determinant of the structure and functional disposition of organs. A hypersecretion of thyroxin by the thyroid, for instance, means greater sensitivity and a more energetic activity of nerve cells in the organ of imagination, which in turn conduces to clearer, more complete, more rapidly formed images. This is not to say that the images are the products of chemical reactions instigated in the brain cells by thyroxin, but simply that the energizing and sensitizing of the brain cells by thyroxin enables them to perform better the work which they must do in the functioning of the imagination.

Besides seeing or imagining an apple, man is aware of the fact that if he is hungry and likes apples, he desires to eat the apple. In other words, he experiences a movement of his sensitive appetite toward the sensible good which he apprehends in the apple, a good which consists in the ability of the apple to satisfy his taste and his hunger. Moreover, when he tastes the apple, he is conscious of a certain joy of satisfaction. Sense appetition constitutes, therefore, a type of activity which is superadded to and caused by sensory knowledge, an activity, consequently, which also takes place in sense organs and is, therefore, conditioned to a great extent by the structure and functional disposition of those organs. This type of activity is characteristic of all the senses, both external and internal. It includes not only the movements of the appetite toward the sensible good and a sense of joy when that good is possessed,

but also movements of recoil from what is apprehended as undesirable in the object as well as feelings of sadness which ensue if the undesirable object cannot be avoided. It includes also various other appetitive movements such as fear, the reaction following upon the apprehension of an evil that is imminent and apparently unavoidable, and anger, the vindictive reaction against an evil that is actually present, etc. These appetitive movements of the sensory appetite are accompanied by changes in the physiological activities of the body, changes which vary in proportion to the intensity of the movements themselves. The whole appetitive reaction, including the physiological changes, constitutes what are commonly called emotions.

Emotional activity is, therefore, an activity of physical organs. Consequently it is easily conditioned as to intensity, frequency, etc., by the disposition of the organs themselves. Moreover, special dispositions of the organs can cause in an individual a greater or less susceptibility to one or another of the emotions. This explains why an individual's emotional tendencies can be determined to a great extent by the functional peculiarities of his endocrine system, since these latter determine the peculiar condition of the organs involved in emotional activity. It explains, for instance, why hyperfunction of an individual's adrenal glands can cause in him a proneness to fear or anger, why hypofunction of his thyroid can deaden his response to emotional stimuli, etc.

Sense cognition and sense appetition have, therefore, physiological activities as their substrate. Nevertheless, they constitute a much higher type of activity than that of which the organs are, of themselves, capable. Hence they give further evidence of the presence in man of some vital principle which is capable not only of elevating non-living matter to the performance of vital physiological activities, but of elevating living organs to the performance of a quasi-spiritual sensory activity completely above their physiological powers. This principle must be, therefore, at least to some degree, an immaterial or spiritual principle, for otherwise it could not elevate material organs to the performance of quasi-spiritual activities.

Man, by the aid of introspection and accurate analysis of his own thoughts and the process by which he forms them, is able to perceive that he performs, over and above physiological and sensory activities, other cognitive activities which terminate in a type of knowledge far superior to mere sense knowledge. By his senses he apprehends sensible qualities of particular material objects, their color, shape, smell, taste, etc. But his senses never penetrate to the essence of the objects whose sensible qualities they apprehend; nor do they perceive such things as the substantiality of objects. His senses do not tell him what a thing is, but only how it looks, how it feels, how it tastes, etc. Essence and substantiality cannot be seen or heard or touched, yet man is aware of the fact that somehow or other they have gotten into his consciousness because he knows at least something about the essences of things and can distinguish the substantiality of a thing from its accidents. By this type of knowledge, then, he has apprehended things that are not sensible but only intelligible; hence he has not apprehended them by his senses but by his intellect.

The only possible way in which he could have arrived at a knowledge of such things as the essence and substantiality of objects, is by a process of mental abstraction whereby his intellect separates, so to speak, that which is intelligible in material objects from the objects themselves, whose existence was first made known to him by the activity of his senses apprehending their sensible, material qualities. When he knows the essence of a thing, he has in his intellect that which is required to constitute the thing, that which makes the thing what it is. Hence he has the thing itself in his intellect, according to its psychical mode of existence and in a purely immaterial way, i. e., without the matter which the thing possesses in its extramental reality and even without the material, sensible qualities as they are in this or that particular object. Hence by the activity of his intellect, he has completely de-materialized the object, so to speak, by giving it a purely spiritual existence in his mind, whereas by the activity of his senses he gave a merely quasi-spiritual existence to the material qualities inher-

ing in this or that individual object. Moreover when he knows the essence of things or their substantiality, he can perform further intellectual activities by forming judgments about these things and by reasoning about them, activities which are completely above the power of his senses.

Man's intellectual activities are, therefore, purely spiritual activities, for by them he completely spiritualizes material things. His intellect itself, then, must be a purely spiritual thing, for only purely spiritual things can perform purely spiritual activities. Intellectual activities, therefore, since they are purely spiritual activities, cannot be the functions of material organs, nor does the intellect depend intrinsically, in either its being or its operations, upon bodily organs. However, the human intellect, as it is in this life, depends extrinsically upon bodily organs, in its operations, for it is by the images formed in the external and internal senses that the intellect first comes in contact with reality and is supplied with the data from which it elaborates its ideas, and these images are, as we have seen, the products of the sensory activity of bodily organs. Hence intellectual activities can be conditioned in an indirect way by the temperament of sensory organs, for the better the structure and functional dispositions of the nerves, brain cells, etc., employed in the formation and transmission of the sensible images, the clearer and more complete will be the images themselves and the more rapidly will they be produced and presented to the intellect for de-materialization, which will greatly increase the clarity and speed with which the intellect forms its ideas and judges and reasons by means of these ideas. This extrinsic dependence of the intellect, in its activities, upon the senses, explains how brain chemistry can determine to a great extent the speed and quality of intellectual reactions. This is not to say that thinking itself is a product of chemical activity or the physiological function of the brain cells themselves, but simply that better disposed brain cells mean better imagery, which in turn conduces to better intellectual activity. This is why more thyroxin in the blood stream, for instance, means better intellectual reactions, because thyroxin sensitizes and energizes all

the nerves, tissues and cells involved in the activity of the sensory organs, particularly the brain cells, of which the internal sense organs are composed.

Here we have further evidence of the elevation in man of an inferior type of activity, namely, sensory activity, to form the basis of a much higher type of activity, purely spiritual, intellectual activity, the elevation of bodily organs, not to the performance of purely spiritual activities, but to subserve the intellect in its purely spiritual activities. Such an elevation again presupposes in man a highest principle which dominates and elevates all his physiological and sensory activities and directs them to the highest type of activity of which man is capable, i. e. purely spiritual, intellectual activity. This principle must be, therefore, a purely spiritual principle, for nothing less than a purely spiritual principle could be the source of purely spiritual activities. It must be, moreover, a principle endowed not only with vegetative and sensory powers but with purely spiritual, intellectual powers. In the exercise of its vegetative and sensitive powers it depends upon and directly employs bodily organs, whereas in the exercise of its intellectual powers it is intrinsically independent of matter though it depends extrinsically upon material organs for the data from which it abstracts to form its ideas.

Man is conscious of the fact that besides physiological, sensory and intellectual activities, he also performs another type of activity, the activity of his will, or volitional activity, by which he desires and enjoys not only material, sensible goods, but also immaterial, spiritual goods such as happiness, peace, virtue, etc. Will is simply that quality by which man tends toward the good which he recognizes in the things that he knows. Hence the appetition of the will is a much higher type of activity than is sense appetition, for by sense appetition man desires and enjoys particular, material, sensible goods which he apprehends by sense knowledge as being capable of satisfying his senses, whereas by volitional appetition he can desire and enjoy abstract, immaterial goods apprehended by intellectual knowledge. In choosing particular forms of goods, particular

kinds of happiness, etc., the will follows the judgments of the intellect as to the desirability of this or that particular type of good. However, the will is intrinsically free in its choices because, although it follows the judgments of the intellect, the intellect itself is in no way necessitated to judge that some particular good is better than another since all particular goods are deficient in one respect or another. Moreover, the will exercises a certain dominion over the operations of the intellect and hence can restrain the intellect from making judgments as to the desirability or undesirability of this or that good.

Since, therefore, volition is simply the appetitive phase of intellectual activity, it is, like intellection, a spiritual activity. Hence it does not intrinscally depend upon material organs nor take place in material organs, as do the movements of the sensitive appetite. The will is, therefore, both in itself and in its operations, independent of matter and cannot be forced in its choices by the disposition of physical organs, by intravisceral pressures or bodily conditions. However, since the object of the will, the good, must first be presented to it by the intellect and since, moreover, the choice of the will follows upon the judgment of the intellect, the will in its operations is indirectly and extrinsically dependent upon sensory activity and bodily organs inasmuch as the intellect itself is extrinsically dependent upon them in its activities. Better sensory activity means better intellectual activity and the clearer and more complete is the intellect's knowledge of a thing, the stronger can be the movement of the will toward the good apprehended in the thing and the more rapidly and energetically can the will react to the judgments of the intellect. Hence the will can be indirectly influenced in its desires and choices, but can never be forced, by the quality of sensory activities and the structure and functional dispositions of physical organs.

Hence the will can be influenced by the emotions, since these are movements of the sensitive appetite. Anger, fear, hope, sensual love can indirectly greatly impede or intensify the desires and choices of will since they can impede or intensify the intellectual activities upon which the will depends. But

they can never force the will, unless they become so intense as to completely destroy the reason. Hence volitional activities can be conditioned to some extent by the temperament of physical organs and the will greatly influenced, though never forced, in its desires and choices by bodily dispositions. This explains why volitional reactions can be influenced by the condition of the endocrine glands, inasmuch as the endocrine glands can greatly influence emotional and intellectual reactions.

These, then, are the kinds of activity which man, the substance, performs: physiological, sensory, intellectual, and volitional. And since the activities of a thing manifest its nature, we must conclude that man is by nature not only one complete substance, but one complete living, sensing, thinking, willing substance, a substance which contains in its totality not only a purely material element but a purely spiritual element, the vital, spiritual principle which dominates and directs all the activities of man and elevates his physiological and sensitive activities to subserve his intellectual activities.

If man is only *one* substance, how can he contain in himself two such contrary elements as pure matter and pure spirit? In the first place, the material element and spiritual element in man must be substances, for they are the constituents of man, and man is a substance. A substance cannot be constituted of anything less than substance. But the material and the spiritual elements in man cannot be two complete substances because two complete substances must ever remain two complete substances and cannot together constitute one substance. The material element and the spiritual element in man must be, therefore, two incomplete substances which complete each other in such a way as to form together one complete substance. The incomplete material substance in man we call body; the incomplete spiritual substance we call soul. Man, therefore, is not all matter; he is not all spirit. He is matter-spirit. He is not a body; he is not a soul. He is a body-soul, one complete substance composed of two incomplete substances.

Now if, of two incomplete substances which unite to form one complete substance, one of the incomplete substances sup-

plies to the composite that which distinguishes the composite from every other kind of being, then that incomplete substance specifies the composite, i. e., constitutes it in a definite species, makes the composite specifically what it is, and at the same time completes the other incomplete substance in such a way as to make it specifically what it is in the composite. This is what the soul does in the body-soul composite, because it is the soul—the spiritual element—which supplies the intellect in man and it is by reason of his intellect that man is distinct from every other kind of living being in the world, from plants, whose vegetative life he shares, from animals, whose sensory life he shares. It is by reason of his intellect that man is man, a human being, a rational animal, constituting a unique species. It is the soul, then, that determines man to be what he is and it is the soul that makes the body what it is in the human composite, i. e., a living, human, body, specifically distinct from all other living bodies. This is why we say that the soul is the form of the body, i. e., that which causes the material element in man to be a living, human body and to act as a living, human body. It is because the soul is the form of the body that the soul dominates and directs all the activities of the body in such a way as to ordain them all ultimately to the production of that activity which is highest and most characteristic of man—intellectual activity. It is the soul, therefore, that elevates the chemical and physical forces in the human body above their natural capacities in such a way as to render them capable of performing vital physiological activities, i. e., nutrition, growth and reproduction. It is the soul also that elevates the bodily organs, composed of chemical elements, to the performance of a type of activity above their physiological powers, namely, sensory activities. It is the soul also that elevates the sensory organs of man in such a way as to render them capable not of performing by themselves purely spiritual activities, but of subserving and ministering to the intellect and will in their purely spiritual activities. In both the entitative and operational aspects of man, therefore, the soul plays the formal role since it is that which formally causes man to be what he is and

that by which he lives, senses, thinks, and wills, the body acting, however, as a co-principle with the soul in the vegetative and sensory activities and as an instrument of the soul in its intellectual and volitional activities.

Here we have the ultimate explanation of the unity of man and of the unity of his operations. Man is a unit because he is composed of two incomplete substances, body and soul, which joined together form one complete substantial whole. And it is because body and soul together form a unit that man operates in a unified manner, that all his activities are so interrelated that one cannot come into play without setting up repercussions in all the others. It is by reason of the substantial unity of body and soul that material, physiological activities can influence spiritual, intellectual, and volitional activities and spiritual activities can influence physiological activities, and both physiological and spiritual activities can combine to produce semi-spiritual sensory activities. It is by reason of this substantial unity of body and soul that endocrine glands can influence not only physiological activities but sensory, intellectual, and volitional activities as well, and can in turn be influenced by all of these.

Moreover, since the soul is the source of purely spiritual activities of intellection and volition, it must itself be a purely spiritual substance endowed with purely spiritual powers. Yet since the soul dominates the body, directs and elevates the physiological and sensory activities of man, it must, as we have said before, be endowed with vegetative and sensory powers, without having to contain in itself the material element necessary for the exercise of these powers. It is only in the exercise of its vegetative and sensitive powers that the soul is intrinsically dependent upon matter.

In itself, therefore, in its own being and in at least its purely spiritual activities of intellection and volition, the soul is intrinsically independent of matter. Hence it can exist in a state of separation from the body and still continue to perform at least its purely spiritual activities of intellection and volition. When the soul is separated from the body, the body dies be-

cause the principle of life has gone out of it and it is now no longer a living, human body, informed with a human soul, but a mere mass of non-living matter. Yet because body and soul together form one complete substance, they have, so to speak, a natural affinity for each other, an inclination rooted in their very nature to be united with each other. Hence it is fitting that after separation by death they should again at some future time be reunited with each other to form again one complete substance. Death is, in a sense, unnatural, since it is the separation of two incomplete substances which are destined by their very nature for union with each other. This is why the soul so strenuously resists separation from the body, why it fights so tenaciously to maintain its union, a fact with which the medical profession is well acquainted. It also explains the natural instinct in man to defend himself against anything that threatens to separate body and soul, the instinct of self-preservation.

The union of body and soul to form one complete substance, man, is, of course, characteristic of every human being since it is that by which human nature itself is constituted. But man is conscious of the fact that although he has the same specific nature as all other men, yet as an individual he differs in many respects from all other men. There must be, therefore, something in the human nature as possessed by him which makes it an individualized nature peculiar to himself. True, the differences he can observe between himself and other men are differences in accidents only, differences of morphology, temperament, and character, which, as we have seen, are only accidental qualities of man. Nevertheless, they indicate that his particular body and his particular soul are different from those of other men. And if his body and his soul differ from those of other men, the composite resulting from the union of his body and his soul must also be different from that of other men. In other words, his body-soul substance must be an individual substance peculiar to himself.

What is it, then, that makes his individual substance differ from that of other human beings? To ask this question is to ask what differentiates his particular soul and his particular

body. If the soul is the form of the body, in order to inform his particular body it must be a soul adapted to his particular body, and because it is a soul adapted to his particular body, it is by that very fact a particular, individual soul, differing from all other souls which inform other particular bodies. His soul is his individual soul precisely because it informs his particular body. On the other hand, since a human body is a human body precisely because it is informed by a human soul, a human body is also a particular human body precisely because it is informed by a particular human soul. Body is the matter, the material cause, of the human composite; soul is the form, the formal cause of the composite. In the line of material causality, therefore, the body individuates the soul. In the line of formal causality, the soul individuates the body. We might say, then, that man's substantial individuality results from his unity, since it results from the union of his body and his soul to form his complete individual substance. We might also say that his accidental individuality, the individuality of his morphology, temperament, and character, also results from his unity, because it results from his substantial individuality which in turn results from his unity.

It is easy to see, then, why psychical individuality, in the sense in which we have been using the term, should correspond to physiological individuality, for since body and soul are individuated in their union to form one complete substance, characteristics of soul, psychical characteristics, such as peculiar ways of reacting to emotional and intellectual stimuli, will correspond to bodily characteristics such as the peculiar structure and functional disposition of physical organs. Physiological and psychical characteristics are, to be sure, only accidents inhering in the incomplete substances body and soul and ultimately in the complete body-soul substance, man. Nevertheless they derive their individuality from the individuality of the substances in which they inhere and hence their individuality is determined by the individuality of those substances.

Moreover, since body and soul correspond in individuality, they must also correspond in perfection. Hence their charac-

teristics also correspond in perfection. A better disposed body will be informed by a better soul and a better soul will have better characteristics. And a better body-soul will produce a more perfect individual, endowed with more perfect physiological and psychical characteristics.

This union of a more perfect body and a more perfect soul to form a more perfect individual is the ultimate basis of the " individual differences " so evident in men, for these differences are simply the physiological and psychical characteristics peculiar to an individual and resulting ultimately from the individuality of his body-soul composite. We might say also that this union is the ultimate foundation of " types " of men, for type classification is based upon the general resemblances among individuals as to physiological and psychical characteristics, and individuals resemble each other in physiological and psychical characteristics because their individual body-soul composites, their individual natures, resemble each other. Hyperthyroid bodies, for instance, will be informed by " hyperthyroid " souls, so to speak, and the resulting body-soul composites will also resemble each other and will display similar hyperthyroid characteristics.

* * *

To return, in conclusion, to a comparison between the doctrines of the endocrinologists and those of St. Thomas and Aristotle in the matter of temperament, it might be argued at this point that to give a philosophical explanation of man's nature and individuality is all well and good, but that this does not necessarily fall within the scope of a theory of temperament. It might be maintained that the discussion should confine itself to a determination of the basic material cause of morphological and psychical individuality and should abstract from the question of formal causality. On such grounds it might appear that the endocrine theory of temperament has fully vindicated itself when it has traced morphological and psychical individuality to the characteristic structure and functional disposition of bodily organs, and this, in turn, to the individual endocrine

make-up as the basic material cause of psychological personality. But a theory of temperament must embrace more than the material cause of individuality in order to be a theory of temperament at all. Temperament is a question of the relationship between bodily dispositions and psychical qualities. Hence it cannot give, as it must, an adequate reason for the influence of such purely material things as organic dispositions and chemical hormones on such purely immaterial things as thoughts and desires, unless it includes, or at least presupposes, an adequate explanation of the relationship between the material and spiritual elements in man from both the operative and entitative points of view.

The argument with the endocrinologists is not that they have established merely the material cause of man's individuality, but rather that they claim this merely material cause to be the total, adequate, and only cause of everything in man's nature. Aristotle and St. Thomas, on the contrary, never claimed more than material causality for their humors as the determinants of man's psychological individuality. They readily admitted that the doctrine of the humors comprised only the material aspect of their theory of temperament, which, to be complete, would have to be understood in conjunction with their doctrines on the intrinsic interrelation between body and soul and hence the intrinsic constitution of man himself.

By way of final comparison, then, we might sum up this whole paper by saying that the endocrinal theory of temperament is, in reality, only a half-theory, claiming to be a whole theory, whereas the humoral theory was a whole theory, the formal part of which was presupposed to the material part. However, it must be admitted that the material part established by the endocrinologists is far more satisfactory and more scientifically correct, at least as to details, than was the corresponding part of the humoral theory. On the other hand, the formal part of the humoral theory was far more perfect than is the formal part of the endocrinal theory, which is, as a matter of fact, identical with the material part. We might say, therefore, that for the establishing of a theory of temperament, the

endocrinal theory can offer more perfect matter, the humoral theory more perfect form. For a really satisfactory and complete theory of temperament, then, the solution is a "hylomorphic" combination of the two.

The endocrinologists have nothing to fear from the Thomists, for Thomistic psychology will always accept and sanction whatever truly verified data the endocrinologists can present. Nor have the Thomists anything to fear from the endocrinologists. On the contrary, both Thomists and endocrinologists can be of real assistance to each other in advancing their respective phases of psychology. And there is great need for such cooperation and mutual assistance, for much work is yet to be done by both philosophers and scientists before the really "whole" man is even half known.

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BOOK REVIEWS

Politica de Vitoria. Por Antonio Gomez Robledo. Mexico City: Ediciones de la Universidad Nacional, 1940. Pp. 165.

La Filosofia de la Ley segun Domingo de Soto. Por Alfonso Zahar Vergara. Mexico City: Editorial Jus, 1946. Pp. 173, with index.

The Main Problems of Philosophy. By Dr. Oswaldo Robles. (Translated by K. F. Reinhardt) Milwaukee: Bruce, 1946. Pp. 210, with index. $3.00.

Philosophic thought in the United States has ever shown interest in the teaching of European thinkers and, in recent years, in the doctrines emanating from the Far East. Rarely has attention been paid the development of philosophic issues by the thinkers of the New World "south of the border." To assign all the reasons for this neglect, and, at times, contempt, would be difficult, not to say temerarious, for one who has not plumbed the complexities of Latin American relations. Yet, one explanation inevitably suggests itself. The tradition of the Catholic Church and its schools and scholars has been foreign to the ways of thinking of the philosophers of the United States and, for the most part, of historical moment; to the cultures of Latin America it has been and is vital. The three works under consideration are evidence of that vitality.

Senor Gomez Robledo presents us with more than a mere essay on the politics of Vitoria; it is a commemoration of the fourth centenary of the *Relectiones De Indis*, it is the homage of a nation to the creator of international law, it is a sketch of the man, his times, his ideals, his theories on the state, and on war. To his own enthusiasm, Senor Gomez adds the critical observations and encomiums of such scholars as Barcia Trelles, Brown Scott, Recaséns Siches, and Thomas Delos, O.P. He finds little to blame and much to praise in the great scholastic, pointing out among other things that Vitoria anticipated the juridical concepts of Kelsen and the Austrian school. He has, however, at times been deceived, partly by his own evident and rather hysterical dislike for Black and Brown Fascism—but never Red!—and partly by verbal similarities into claiming Vitoria as a supporter without further qualification of democracy in whatsoever *milieu* that much abused word be applied. No doubt further study and fuller penetration into their terminology will reveal to him how Thomists, by virtue of the distinction between the ultimate object of authority and its actual exercise, can upon occasion demand a single strong ruler, without becoming Fascists.

Senor Zahar Vergara has dedicated his nascent talents to a study of

Vitoria's great disciple and first conquest, Dominic Soto, O.P., the Lion of Trent, whose treatise *De Iure et Iustitia* lay side by side with Vitoria's *Relectiones* in the library of every jurist of consequence in Europe for centuries.

There is a suggestion of Jaspers (*Psych. d. Weltan.*) in the way he begins his study with rather more than a glance at the intellectual ferment of the time in which Soto moved, as evidenced in the ideas of three of Soto's contemporaries: in Vitoria, the denial of arbitrary power to the prince and the exaltation of individual conscience as the basis of justice and right; in Melchior Cano, the denial of special privileges to the temporal power of the Pope and his consequent exposure to the hazards of power politics; and, in Mariana, the denial of absolute power and the justification of regicide as a threat to ambitious and immoral rulers. Soto then is conceived as a product of his times; the doctrines of the Fathers and Doctors of the Church, ordered and co-ordinated by St. Thomas, under the impact of the religious, social, and political upheavals, guided by Vitoria, resulted in a treatise on juridical metaphysics which is fundamental to all juridical knowledge. Then after a brief biographical sketch, Soto's doctrine is summarized under three headings: the general concept of law, the eternal and the natural law, and the human or civil law. Soto is Thomistic throughout. In presenting Soto's thought, Zahar constantly compares him with St. Thomas and not infrequently finds St. Thomas clearer and more definite. Hence Soto seems to stand in relation to St. Thomas as human to eternal law, as application of the principles to actual circumstances. Unfortunately, this little book will be unintelligible outside the tradition of the Schools, since what is here assumed as evident has been denied and now forgotten; eternal law, objective norms of right and wrong, common good, are but musty relics, archaic curiosities of a darker age in the enlightened legal philosophy of Wendell Holmes and Roscoe Pound. Senor Zahar has dedicated his work to his former professor at the National University who guided him safely through the tempest of modern writers into the haven of Thomism, Dr. Oswaldo Robles.

Dr. Robles' work *The Main Problems of Philosophy*, first appeared in Mexico City in 1943 under the title *Propedeutica Filosofica, Un Curso de Introducción general a la Filosofía*. Impressed with the unusual qualities of this introduction, Dr. Reinhardt, with the assistance of his colleagues at Stanford University, translated it into English, and finding himself unable to render *Propedeutica* into English, changed the title to the possibly misleading one of *Main Problems*. The book is divided into nine chapters of unequal length. The first, and perhaps most important, is on the nature and definition of philosophy and its place among the sciences, followed by chapters on the division, methods, and six parts of philosophy. In other words, we have a general survey of the aim, method, and content of philosophy.

Even without Dr. Reinhardt's introduction, one will not read far before realizing that here is a remarkable book. The omission of any adjective in the title becomes doubly significant, for philosophy is soon revealed as pure Thomism. Here we have a layman, not a cleric and therefore not swayed by theological or authoritarian preoccupations, not, so to speak, a professional Thomist, who has evidently tried many of the modern philosophies and found them all wanting and who by preference adopts Thomism, and indeed fully and whole-heartedly. His chair is not in a Catholic school, but in a State-supported and otherwise antagonistic one, and yet so filled is he with a sense of his responsibility to Truth, that he proposes the system of St. Thomas without qualification, apology or reserve as its source and safeguard.

If it be agreed that a good introduction to any discipline requires a nice discrimination as to what to include and what to leave for further study, as well as a certain dexterity in stating problems so that the student's interest is aroused and sustained without stultifying him, combined with a not too common ability to bring out certain aspects of truth common to several schools or systems of thought without generating confusion or lapsing into a despondent eclecticism, and to organize various conflicting theories under the problem to which they are relevant, then Dr. Robles has written a good introduction.

The first problem is to explain what is meant by philosophy. Dr. Robles, proceding inductively by the use of common notions of knowledge, shows that we distinguish various types or levels of knowledge. Realizing that the common but preverted notion of " science " may cause confusion, he shows how that word can have various meanings, and just what meaning is applicable to philosophy. He starts with Aristotle's famous observation that all men desire to know, and before he concludes the chapter, Heidegger, Meyerson, Comte, Poincaré, Schlick and the School of Vienna, Hostelet, Driesch, Max Scheler, Husserl, St. Thomas, St. Augustine have been questioned and their answers weighed; he ends with a quotation from Plato's *Phaedrus*. A fine meditation on the dignity of philosophy as the most noble and most worthy discipline includes ideas from Plato and Pascal, Aristotle and St. Thomas.

Dr. Robles begins his second chapter, on the major divisions of philosophy: " the philosopher who faces reality is not unlike a clear idea confronted with chaos "; the philosophical ideal of St. Thomas is described in the words of Mallarmé, to express " the hymnic melody of the relations of all things." He adopts and explains the division given by St. Thomas in his commentary on the *Nicomachean Ethics*, and in its light criticizes the Wolffian melange which Neo-Scholastics support and also a neo-Kantian division proposed by the Mexican thinker, Dr. Antonio Caso.

His third chapter, one of his best, begins with an encomium for the

phenomenological method of Husserl as one of the most significant discoveries in the entire history of philosophic thinking. Yet, Dr. Robles finds its antecedents in the philosophy of Plato, Aristotle, and St. Thomas. He rejects it as a philosophical position, a sort of sterile idealism; but accepts its method, which he finds really incompatible with idealism, for its reliance on the absolute and apodictic evidence of direct intuition which is akin to the intellectualism of St. Thomas. He avoids, however, the intuitional method of Bergson as destroying the ontological value of the intellect. Finally, he exposes the Scholastic method by first clearing away some misconceptions and then distinguishing two aspects which are often confused, the didactic and the investigative.

> We believe that this method is the most efficient for the teaching of philosophy, provided that it is not carried to such extremes as to make it sterile and to deprive it of its originality, a censure which must be leveled at the philosophers of the scholastic decadence. For those who would profitably make use of this method we therefore recommend that they familiarize themselves first of all with the writings of the great masters of scholasticism, and that they avoid the reading of those bloodless and mechanized "manuals" which some mediocre writers mistakenly confound with the rich and fertile tradition of genuine scholastic philosophy.
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> As a method of scholastic investigation, scholasticism adheres to the evidence of the first principle of knowledge. It makes use of both deduction and induction, but it bases the validity of both on the *a priori* intuition of first principles. It is not a narrow or exclusive method; it does not pass judgment on any doctrine without having first examined it in the light of basic rational evidence, and it disregards the argument from (human) authority as more or less unsafe. The argument from authority is proper to theology, but not to philosophy, which takes *reason* (ratio) and rational evidence as its guides. Those who believe that scholasticism is a dogmatic system of philosophy demonstrate in holding this opinion that they have never penetrated to the genuine sources of the scholastic tradition. (p. 41.)

Nor, it is feared, will they read the pages of Dr. Robles.

The fourth chapter on the "Theory of Knowledge" betrays the real interests of Dr. Robles. Phenomenology in the person of Nicolai Hartmann receives a careful and a sympathetic study, and is commended for placing the problem of knowledge not in psychology or in logic, but where St. Thomas and the Spanish Scholastics of the *siglo de oro* placed it, in ontology. "St. Thomas, the thirteenth century philosopher, and Hartmann, the contemporary German philosopher, have the same clear and penetrating vision . . . however, though in agreement as far as their high esteem for the data of "direct intuition" is concerned, (they) differ profoundly in their interpretation of these data." (p. 59.) Dr. Robles conceives of the theory of knowledge as "a basic philosophic discipline of speculative character, whose formal object is the elucidation of the aggregate problems

generated by the subject-object relationship." After surveying the problem, which is innate to the tension between being and becoming, although the simplifications of the manuals obscure the fact, in thinkers from Heraclitus to the latest Neo-Realists and Neo-Thomists, he outlines a solution which is basically intellectualistic and Thomist but arrived at through phenomenological analysis. From this position he then considers the Formalism of Kant and all the forms of Idealism, which are rejected because "the idealist does violence to the act of intuition and rejects the evidence of being; he takes the data of direct intuition, empties them of their ontological content, and puts in its place a preconceived concept of abstract metaphysics." (p. 85.) This whole chapter compresses a wide field of reading and discussion into a well-ordered treatise, offering suggestions for further study and managing to convey a welcome amount of historical background without appearing to do so.

Since Dr. Robles considers the theory of knowledge as a general preface to metaphysics, his next chapter is on metaphysics itself. Here he inserts some ten pages on Aristotle and the vicissitudes his writings underwent, the commentaries and critical editions of the *Metaphysics*. Then he exposes and criticizes four concepts of metaphysics, the scholastic, the Hegelian, the Bergsonian, and the existentialist as proposed by Heidegger. Here his critical sense fails him somewhat, for Hegel is dismissed as sophistical, Bergson as evasive, and Heidegger as deficient and "nihilistic," a cavalier treatment that is partly compensated for in the next chapter. In the next section the concept of being, its division into rational, real, ontological, intentional, its modes of potency and act, essence and existence, substance and accidents are sketched. On the question of the real distinction he is somewhat reticent, only implying that all scholastic authors do not follow St. Thomas. As for himself, "the denial of the real distinction . . . in creatures . . . comes very close to pantheism." Hence his delicacy in not naming those Catholics who deny it. His exposition of the principal points of metaphysics is a little too pat, even for an introduction, and one trained in the school of St. Thomas can only marvel at a discussion of being which does not even once mention analogy. Nor does the problem of causality receive any mention until the Kantian antinomies are treated in the next chapter on Natural Theology. But the most interesting section of this chapter is entitled "Axiology," the theory of value, in which Dr. Robles deftly integrates the modern discussion of value—which he dates from Brentano (1889)—into the Thomistic theories on relations and on the "adequate good." Far from being the totality of philosophical investigation or even an autonomous discipline, axiology is presented as a part of metaphysics. Thus we should speak of an axiological metaphysics: the being of values, axiological epistemology: the knowledge of values, and the philosophy of civilization, which studies the problem of the realization of values.

Compared to what has gone before, the chapter on Natural Theology is brief, and as commonly understood, extremely incomplete. In fact, all that it contains is a commentary on Question Two of St. Thomas, the problem of the existence of God; nothing at all is said of the nature of God as attainable by reason. By a criticism of Ockham and the Fideists, the Traditionalists, Ontologism, and Bergsonian Intuition, he shows the necessity for a demonstration. By criticizing the agnosticism of Spencer and Kant, he shows the possibility. By rejecting the arguments *a simultaneo* like the Ontological argument of St. Anselm, and the arguments *a priori*, he prepares the way for his exposition of the *a posteriori* arguments which are the *Quinque Viae*. But this rather jejune chapter ends with a priceless little essay on the futility of existentialism, entitled the "Metaphysics of Human Existence," inspired perhaps by the God-hungry cry of St. Augustine, for it concludes thus:

> And why does Heidegger's existential metaphysics lead us into a blind alley? Because his existential analysis exhausts itself in negation and terminates in nothingness. St. Augustine, on the other hand, arrives at the plenitude of Being; he finds shelter and safety in the boundless heart of the Eternal God.

Dr. Robles does not do himself justice in the next chapter on the philosophy of nature for, since it "aims at an integrated and unitary explanation of the diversity of substances as they exist in nature" it is far too short to even enumerate all the problems of cosmology and psychology. Perhaps he felt that psychology would be sufficiently dealt with in the exposition of phenomenology in the Theory of Knowledge. Further he tantalizingly proposes a third discipline, midway between cosmology and psychology, which he calls rational biology, the formal object of which appears to be those operations of the psyche that are intrinsically linked with organic corporality. Perhaps at some future time, he will expatiate on the objectives and method of this new science. The fundamental problem in this chapter is the nature of bodies, and from a review of the three solutions, Atomism, Dynamism, both physical and metaphysical, and Hylemorphism, he turns to the form which gives life, namely the soul, and there he rests.

In his chapter on Logic, he discusses three types, the Psychologism of John Stuart Mill. the Logical Formalism of Kant, and the Metaphysical Logic of Hegel. He shows that Thomistic logic, if there be such a monster, is diametrically opposed to Kantian Formalism, and approaches Hegel because it presupposes the ontological validity of knowledge. The central problem of logic is the famous dispute on the Universals, in which St. Thomas took a position between the two extremes, called Moderate Realism.

In his last chapter on Moral Philosophy, Dr. Robles attacks the

problem of distinguishing speculative from practical knowledge without divorcing morality from reason as Kant was forced to do. He accepts the four-fold division of science given by Maritain in the *Degrees of Knowledge*, and defines moral philosophy as that "speculatively practical knowledge which establishes the ideal norms for the realization of human acts and which ordains man to his ultimate end." He reduces all ethical systems to four, Hedonism, Eudemonism, the Ethical Formalism of Kant, and the "material ethics of Value" which latter he describes as an attempt by Scheler, applying Husserl's method to the practical order, to overcome the formalism and unreality of Kant. This attempt is unsuccessful because still based on something subjective, "the aboriginal exercise of emotional intuition"; the objectivity so necessary in a regulative norm still escapes Scheler's grasp.

In a few closing pages, Dr. Robles seeks to anticipate criticism of his copious extracts from the history of philosophy, and his extensive use of technical terminology. The first he answers by citing the example of St. Thomas who, while no "historicist" in the modern sense, learned from the ancients to accept what was true and to avoid what was false. The second is so obviously true, that one wonders whether this is not rather a work of orientation, rather than initiation. For this is not a simple book, couched in semi-popular language. Take for example, the observation (p. 177) that the "practical" character of knowledge, as distinct from "speculative," springs from a combination of formal and final causality. It is hardly our idea of an introduction at all, unless Mexican undergraduates are of higher mental capacity and further advanced than ours. This, of course, is quite possible if Mexico retains the Thomistic idea of education as a discipline, a training in thinking, instead of the dismal doctrinaire Deweyism we enjoy. But the competent order and insight of Dr. Robles' book will repay time and hard work much more richly than the Hocking-Blanschard-Hendel-Randall prefaces to philosophy or Mead's *Types and Problems of Philosophy*. One is aware that Dr. Robles not only knows, but knows that he knows, and so too will his student if he exert himself.

The gravest criticism that can be leveled against Dr. Robles is that he does not always heed his own prescriptions. His pages are comparatively innocent of references to the great Scholastics or Commentators; his sources are all too often second and third hand, and not always the best. Maritain is cited fourteen times; John of St. Thomas, three; Cajetan, three; Banez and Capreolus, once. Particularly, the bibliographies appended to each chapter could be greatly enhanced in value were the "genuine sources of the scholastic tradition" appealed to rather than manuals and expositions of questionable pertinence and dubious Thomistic purity. In this way advantage could be taken, for instance, of the *Cursus* of John of St. Thomas,

made available in recent years. The writings of Santiago Ramirez, O.P., especially his *De Ipsa Philosophia* in "Ciencia Tomista" would be extremely helpful in a survey of this sort. Dr. Robles appears more at home with the nineteenth century Germans than with the sixteenth century Spaniards and Italians, at least, he refers to them more frequently. Nor is this a contradiction of what was stated at the beginning of this review about the cultural heritage of Latin America; it but emphasizes how naturally correct values and ideas come to him, for we only take pains with that of which we are uncertain or with which we are unfamiliar.

The value of Dr. Robles' work founds a debt of gratitude to Dr. Reinhardt and his associates for putting the book within the reach of English speaking readers. The scond edition will undoubtely correct such defects as mistaking Cajetan for Cardinal de Vio's first name, or the confusing references to Zeferino Gonzales. It is to be hoped that revision will also include improvement of the bibliographies mentioned above as well as some material on the use of sources and standard bibiographies like the *Bulletin* Thomiste and Vernon Bourke's excellent work. A second edition should be called for since *The Main Problems of Philosophy* should prove more than useful to those engaged in the pursuit of Wisdom, whether sacred or profane.

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Religion In Economics. By John R. Everett. New York: King's Crown Press, 1946. $2.50.

In his recently published study, "Religion In Economics," John Rutherford Everett investigates the relationship between religion and economics in the work of three American economists. The objective of the study seems to be to delineate the influence of religious thought in the economic theorizing of the men involved—John Bates Clark, Richard T. Ely, and Simon N. Patten. To the execution of this worthwhile project Mr. Rutherford brings a comprehensive knowledge of the economists with whom he is concerned and a consistent objectivity in the presentation of their ideas. The author makes it clear however that his treatment of the subject matter is biographical and not critical.

It would seem that the first quite obvious limitation of this study is its ambitious title. Very simply, Mr. Rutherford is unwittingly guilty of proposing a thesis which in its phrasing promises so much but which in its actual development fulfils so little of its intriguing possibilities. Had the author presented his study as "The Influence of Protestantism on Three American Economists" its title would have been admittedly more un-

wieldy but immeasurably more accurate. The fact of the matter is that great, good, and sincere as these three gentlemen were in their personal Christianity they certainly shared an irritating intellectual blindspot where Catholicism was and is concerned. Consequently, the term "religion" in the title must be understood necessarily in a restricted sense.

It could be that John Bates Clark, Richard Theodore Ely and Simon Nelson Patten felt no compulsion to investigate the monumental contributions of the Church to social philosophy, but that is hardly credible. It might be that, knowing of the majestic synthesis of Thomas Aquinas, they nevertheless dispensed with it as the dated summation of medieval superstition and casuistry. This, of course, would be a serious indictment of their scholarship, if true. Conceivably the Encyclical "Rerum Novarum," issued in 1891, failed to impress the generality of American social philosophers. But this seems contrary to established fact. At any rate, Mr. Rutherford's study reveals no substantial and pertinent references to the vast treasury of Catholic ethical doctrine, *identified as such*, in any of the works of Clark, Ely, and Patten. This glaring omission is the fundamental weakness in an otherwise laudable effort to return economics to its rightful place in the hierarchy of morally informed social sciences.

To understand what Clark, Ely, and Patten were attempting in the formulation of their theories one must be given a quick preview of the age in which they lived and labored. The period 1870 to 1900 was crucial in our economic history. American capitalism had very literally come of age by the end of the eighties and in the subsequent decade its lusty acquisitiveness had crystallized in that economic system which has made the United States materially great. In the process of phenomenal growth, however, the social cost had been tragic. The divorce of economics from ethics—implicitly contained in the works of Ricardo, Nassau Senior, and John Stuart Mill, and actually effected by the Manchester School—provided a convenient rationalization for the ruthlessness of the "roaring nineties." The result was an economy in which bigness became the sole criterion of success and in which those who were successfully "big" indulged their fabulous wealth in the vulgar display of what Thorstein Veblen so aptly described as "conspicuous consumption." This was a gilded, glamorous decade in which, beneath the glittering surface of things, the inherent greatness of a relatively young nation was compromised by the manifold injustices of a capitalism the essential goodness of which was obscured by the immorality of those who employed it for their own self-aggrandizement.

From the very inception of the Industrial Revolution earnest men recognized in nascent financial capitalism ominous possibilities for great injustice. As the Revolution ramified throughout the western world these potencies were actualized in the great discrepancy between the concentrated wealth of the few and the cumulative pauperization of the dispos-

sessed many, in the chronic cyclical maladjustments and their consequent mass unemployment crises, in the monotony and dehumanization of industrial mechanization. All this impelled a small but significant coterie of humanitarians to urge the Christianization of economics. In the United States, prior to the Civil War, Theodore Parker and William Ellery Channing inveighed against the inequities of the age in which they lived. The latter half of the Nineteenth Century found George Herron and Washington Gladden advocating that "the church (Protestant) change from a means of grace for the individual soul to an agency for constructive social action."

However, it remained for John Bates Clark, internationally recognized at the turn of the century as America's outstanding economist, to oppose a voluntaristic and moral social philosophy to the predominant determinism and materialism of the schools. Both Patten and Ely differed with Clark on strictly economic grounds. But both shared with him the attempt at introducing to a greater or lesser degree contemporary economic social philosophy to Christianity. The anomaly of their position is the fact that, deliberately or unknowingly, they failed to avail themselves of the one completely integrated social philosophy, the departure from which had made possible the immorality of the situation against which they crusaded.

The formulation of the social philosophy of John Bates Clark can be ascribed rightly to three powerful influences in his life. The son of God-fearing New England parents he grew to young mandhood in an atmosphere of Evangelical Protestantism that left an irradicable impress on both his character and mentality. As a student at Amherst College he later attracted the attention of its famous President, Julius Seelye, who taught economics as a branch of Moral and Mental Philosophy. It was Seelye who prevailed upon Clark to forsake contemplated studies for the ministry and devote his talents to the field of academic economics. Upon graduation from Amherst young Clark departed for Germany where at Heidelberg he became a devotee of the theories of Professor Karl Kneis, the most outstanding representative of the Historical School of economics. These three factors—his childhood formation in the deeply religious environment of a Christian home, his introduction to economics as a specialized phase of moral philosophy at Amherst, and the organismic analysis of society proposed by the German economists of the Historical School—contributed substantially to the new orientation given economics by Clark on his return to the United States.

The genesis of Clark's social philosophy emerges in a series of articles appearing in the magazine "The New Englander." The first of these significant essays was published in January 1877, and for nine subsequent years Clark developed his theories in the pages of the magazine until in 1896 he gathered the expanded articles into his classic book "The Phi-

losophy of Wealth." The thesis proposed in this work marks a departure from the then current economic theorizing of almost universal Classicism. The trouble with classical economics, Clark maintained, was that it adhered to " a degraded conception of human nature (which) vitiated the theory of the distribution of wealth." It was imperative then that a new theory be presented which considered man as a whole. The beginning of all economic theorizing presupposes a true knowledge of man, not only in his individual state but man as an atom in the social organism. It is only when the scientist constructs an image for his discussion that is the man whom God created that any advance in the analytical work of the economist will be made. The significance of this plea for an approach to economics that would regard man as the creature of God rather than an isolated mechanism determined by immutable economic laws, can hardly be understated.

Today, John Bates Clark is recognized among economists as the author of the one generally accepted academic theory of cost determination in a competitive economy. This device, widely developed in all classical texts, is known as the theory of marginal productivity. In its practical application, particularly with reference to the regulation of wage rates, the marginal technique can be thoroughly unethical. It is the irony of history that Clark should be placed among the world's foremost economists largely by virtue of his perfecting a theory which in his earlier career he would have vigorously opposed and with which, in its contemporary unqualified version, he would certainly not concur. At any rate Clark once wrote that " the competitive principle instead of being supreme and resistless exists at best by sufferance. It is subject to constantly narrowing restrictions and is liable in particular forms to be totally suppressed by the action of *that moral force which is in reality supreme.*"

From the standpoint of Clark's contributions to an ethical social philosophy, his earlier rather than his later theorizing offers more abundant evidence of a conscious effort to rationalize economics on a thoroughly moral basis. This, of course, is not to imply that even in his more mature works he did not continue the attempt to integrate the technicalities of economics with moral imperatives. But, certainly, in his *Philosophy of Wealth* he defends unequivocal propositions which at a later date he would find inconsistent with his then accepted general thesis. Among these propositions is the idea that arbitration and cooperation rather than competition will determine social rewards. Applying this concept to the area of industrial relations Clark laid down a principle whose essential validity become increasingly more evident in our generation. Maintaining that the division of wealth in a capitalistic society is both unequal and unjust, he urged two correctives. " First labor must organize to the same point as capital, then there must be an increase in the effectiveness of moral

agencies so that the transition can be more easily effected. The principle of cooperation must be instilled in all so that the divisions of the product made by arbitration will be honest, just, and equitable. Upon arbitration, profit sharing, and full cooperation must be our dependence for the solution of the labor problem."

If a correlation of Clark's theories were attempted it would be extremely difficult to reconcile his advocacy of what would be, in modern terminology, a labor monopoly with his later defense of technically unrestricted competition. However, in urging that the organizational strength of labor parallel that of capital and that arbitration, profit sharing and cooperation be widely employed in the resolution of capitalistic inequities Clark was not only more faithful to his Christian consciousness but also vastly more realistic than in his later writings.

The acknowledged standard bearer for the American School of "ethical economists" is Richard T. Ely. Like John Bates Clark he had the initial and indispensable blessing of a sturdy Christian home. Ely's parents took their Presbyterianism seriously. However the sanguine disposition of their offspring militated against his acceptance of Calvinistic predestination and in his early young manhood he sought a more optimistic solution for the mystery of life and death in Universalism. After attending both Dartmouth and Columbia Colleges Ely won a travelling scholarship permitting him to do graduate work abroad. Eventually he gravitated toward Heidelberg and its great Professor Karl Kneis and there his reactions to the Historical School were as enthusiastic as those of his countryman, Clark. Arriving back in the United States in 1880, Ely shortly published *The Labor Movement in America.*

No radical, Ely sought a solution to the problem of industrial relations that would provide equity for both capital and labor. The Christian religion, he maintained, "has within it all that is necessary for the solution of society's problems. The sciences of theology and sociology come from two parts of the one statement made by Christ: Love the Lord thy God with thy whole heart and thy neighbor as thyself. . . . Theology is the science of God and His relations to His creatures. But the whole science is simply an elaboration of the first two great commandments on which hang the whole law and prophets. . . . The second part of this commandment . . . and thy neighbor as thyself . . . is in its elaboration, social science or sociology. . . . *If men could see the real truth involved in this simple Gospel of Christ all questions would be solved.*"

Ely argued that the British writers of the Classical School had removed man from the center of economics and had replaced him with wealth as the material cause of the science. The influence of the German school of economists enabled Ely to blend his own deeply religious convictions with his zeal for humanitarian reform in the area of the social sciences. The

laissez-faire economists who reduced economics to an elaboration of the law of demand and supply were, for Ely, proposing a doctrine that was not only fatal to public policy but contrary to the social Christianity in which he ardently believed. Paradoxically, however, Ely favored competition as "the chief selective process . . . in economic society and through it we have the survival of the fittest." He resolved this apparent contradiction in his theorizing by placing a new interpretation on the word "fit," at least in its economic connotation. For Ely those who were rendered "fit" by the competitive process were necessarily a "brave, strong race of men, and the brave and strong are merciful." Certainly this reveals naïveté in Ely but is typical of his vast optimism and faith in man's perfectibility.

Richard T. Ely's greatest distinction lies not in his economic theorizing. Actually he was much more the sociologist than the economist. Rather, it was Ely's insistence upon the ethical in his approach to the social sciences that sets him apart, with John Bates Clark, as a recognized scholar who believed that the perfection of that scholarship presupposed its integration with the Gospel of Jesus Christ.

In introducing the biographical treatment of Simon Nelson Patten's intellectual development the author says of Patten, "if Ely can be called the prophet of religion in economics Patten can claim the title of theologian." Frankly, we disagree sharply. Patten is neither a theologian nor for that matter an effective economist. He is not a theologian for the simple reason that his conception of religion is nothing more than an irritating eclecticism of isolated biological, philosophical, and sociological half truths with a dash of very unique "theology" added for good measure. And despite the fact that Rexford Tugwell believed him to be "the most original and suggestive economist that America has yet produced," Patten's pragmatism, so widely applied in the Welfare Economics of the New Deal, proved an exceedingly uneconomical and expensive experiment for the people of the United States.

Both Clark and Ely consistently maintained in their writings the traditional and supernatural interpretation of religion. Fundamental to their thesis is the truth of the brotherhood of man under the fatherhood of God. The society envisioned by both was no friendly nebulous association of men but a truly religious fraternity of mankind. For Patten, however, "God is the sum total of all man's ideals, aspirations, and hopes projected into personalized form and dealt with in terms of a picture language. God's Kingdom is the goal toward which man moves; it is the type of society within which all ideals and hopes are finally realized."

Patten, like Clark and Ely, knew a home in which sincerely religious parents created a strong moral environment. After a boyhood and early youth in which he failed to reconcile the inflexible Calvinism of his father,

particularly, with his own religious gropings he left Northwestern University, where he was entered as a law student, and embarked for Germany in pursuit of greater philosophical knowledge. Unlike his contemporaries, Clark and Ely, he preferred the university of Halle to Heidelberg. Arriving back in the United States he worked for a time on his father's farm and then resumed his legal studies at Northwestern. During these years Patten underwent both severe physical suffering as his eyesight threatened to fail him permanently and intellectual frustration as his novel theories received little recognition.

In 1911, his eyesight restored and his ideas given hearing in certain academic quarters, Patten published his first really important work, *The Social Basis of Religion*. Here, in this book, he presented his novel interpretation of religion. Briefly, the thesis developed by Patten is presented by Mr. Everett as follows: Knowledge is divided into three classifications.

> In the first instance there is the knowledge gained in the acceptance of social tradition; then the knowledge of fact which is gained from sensory experience; and finally knowledge of value that depends upon motor data. Each one of these areas has its own test for validity; yet they are all closely related. A true judgement on the accumulated knowledge of civilization is made on the basis of *its utility*. If it in no way elicits an active motor response, it can be discarded as false. In other words *an idea is true only when it has a specific value placed upon it and when that value is sufficiently strong to call forth definite action.*
>
> It is most important to know how values can be tested. "Values are judgements about means to an end." If a particular means is chosen to gain a specific end, *the only test of its validity is to try it.* If it works, that is, if the end is achieved with the greatest economy of effort, we then can judge the value to be true. When values are expressed as judgments they are called beliefs. *True beliefs are those that work out in practice,* and are consequently never completely false or true, but rather becoming either true or false. "Belief, truth, and action are thus bound together and all of them are tested by the consequences they bring." Religious beliefs are true when they perform a function in society. If they elicit an activity that is detrimental to the accepted social end they are pronounced false; if however they contribute to social well being and the establishment of Utopia they are true . . . Patten . . . considers the older historical interpretation of religion to be false because it produces an emphasis on personal salvation rather than social redemption.

Certainly Mr. Everett is aware of the frustrating utilitarianism of so much of the recent practice the philosophy of which is adequately contained in the above synthesis. Since the author protests that he offers here no critical study his failure to stigmatize on purely theoretical grounds, Patten's pragmatism is understandable. But why he should inconsistently confer the accolade of "theologian of religion in economics" upon a man whose theological illiteracy is so appalling is academically inexcusable. It would have been considered more objective and immeasurably more discreet

if Mr. Everett had permitted his readers to form their own judgments about Patten and his theories.

In summation we believe that Mr. Everett has succeeded rather well in delineating the religious ethos in the theorizing of John Bates Clark and Richard T. Ely. However, we cannot insist too strongly that the contributions of these gentlemen have the character of restatement rather than originality. If in the nineteenth century Clark and Ely defended so ably the thesis that economics should not be divorced from ethics it must be remembered that they were merely reiterating the position of seven centuries old Thomism. And if these two Christian gentlemen had recognized the Calvinism against which they rebelled in their youth as the theological root of the separation of economics from the area of morals and, having recognized this fact, delved deeply into the *Summa* of St. Thomas, they would have found there the indispensable *dogmatic validation* of the ethical doctrines they preached.

In our opinion Simon Nelson Patten should not have been included as an exponent of religion in economics. It is true that Patten believed in a social Christianity which for him at least assumed the proportions of a faith. But any dispassionate analysis of his doctrines reveals that his unorthodoxy was so marked, the departure in his philosophizing from traditional Christianity so obvious, that to classify him with Clark and Ely is very nearly tantamount to misrepresentation. Patten's intentions may have been admirable but the implications of his teachings, when actualized in practice, could be, as they have very nearly been, nothing short of disastrous.

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The Three Ages of the Interior Life. (Volume I.) By REGINALD GARRIGOU-LAGRANGE O.P. (Translated by Sister M. Timothea Doyle, O.P.) St. Louis, Mo.: B. Herder Book Co., 1947. Pp. 517, with bibliography and index. $5.00.

Common Mystic Prayer. By GABRIEL DIEFENBACH, O.F.M. Cap. Paterson, N. J.: St. Anthony Guild Press, 1947. Pp. 136, with bibliography. $1.50.

Father Garrigou-Lagrange is one of the acknowledged contemporary masters of Dominican spirituality. For all the years of his long career as a teacher and writer, he has fought a continuous battle to reestablish traditional principles of the spiritual life and to bring out the Dominican contributions to the tradition. There are still many theologians who do not

agree with the great Dominican authority, but they no longer hold as tenaciously as they did once to the views of the spiritual life that were current during the 19th and early 20th centuries. In an attempt to avoid the errors of quietism theologians began to split up the unity of the spiritual life by overemphasizing the differences between the ascetical and mystical states of soul. The peak of this trend can be found in the article on *Mysticisme* in the *Dictionnaire de Theologie Catholique*, which practically identifies mysticism with the miraculous.

While admitting that there are many extraordinary phenomena in the lives of some mystics, Fr. Garrigou-Lagrange has insisted that the substance of the mystical life needs no extraordinary principles, such as infused ideas, but is a normal, though unfortunately rare, development of the supernatural principles that are present in the soul from baptism, viz. sanctifying grace, the infused theological and moral virtues, and the gifts of the Holy Ghost. Especially in the last he finds an adequate explanation for the essentials of the mystical life; the growing predominance of the activity of the Holy Ghost through His gifts, the corresponding perfection of the theological virtues, establishes the soul in a state of perfection that is just short of the perfection of heaven by the absence of the Beatific Vision. Such perfection cannot be attained by an active spirituality, for it requires a purification of soul that can come only from the initiative of the Holy Ghost working in the soul in what S. Teresa always refers to as a " supernatural " way. During such times of purification the soul is no longer the initiator of its own activity, but it is being moved by a higher principle.

Fr. Garrigou-Lagrange has written many works on the spiritual life. Some have been translated into English, but their value to the ordinary reader is somewhat lessened by their controversial preoccupations. The present volume (the first of two) is much more satisfying reading, although the author is still defending his favorite theses. Yet the chief aim of the work is to present a complete account of the spiritual life from its beginnings in the desire of the soul to lead an interior life to its culmination in the transforming union. The first volume is concerned with the fundamental principles of the spiritual life, which are taken from dogmatic and moral theology. Then, utilizing the traditional division of the spiritual life into that of beginners (the purgative way), of proficients (the illuminative way), and the perfect (the unitive way), Fr. Garrigou-Lagrange turns his attention to the state of beginners.

It might be well for the general reader on opening Fr. Garrigiou-Lagrange's book to start with the last chapter on " Retarded Souls." A careful reading of what he has to say on this subject will arouse in the soul a more receptive disposition for the other sections of the book; as he says: " Some souls, because of their negligence or spiritual sloth, do not pass from the age of beginners to that of proficients. These are retarded souls; in the spiritual life they are like abnormal children, who do not

happily pass through the crisis of adolescence and who, though they do not remain children, never reach the full development of maturity. Thus these retarded souls belong neither among the beginners nor among the proficients." (p. 461) Such spiritual tragedies occur too frequently in the spiritual life. Even some religious, who after years of training are subjected by God to a severe trial have not the courage to accept it generously. Yet such acceptance might mark the turning-point in their religious lives.

The spiritual life from beginning to end is marked by two distinct but complementary processes—purification and illumination. The purifying process is necessary to root out all obstacles to union with the all-Holy God. The illuminative process consists in the increasing perfection of the life of contemplative prayer and the growth of all the virtues or the progressive union of the soul with God through knowledge and love.

In the life of beginners these two phases are manifested by increasing generosity in the practice of mortification and the gradual development of a habit of meditation. Father Garrigou-Lagrange gives all the practical help needed to make progress in both of these activities. His consideration of the obstacles to progress and the method of their removal is especially worthy of praise. This is not the place to discuss what constitutes Dominican spirituality. Yet it is important to point out how Fr. Garrigou-Lagrange manifests that spirit in his writings. If anything characterizes Dominican spirituality, it is a regard for the intellectual, and insistence on the necessity for true understanding. It is not merely a demand for speculative understanding, for correct knowledge of theoretical principles; there is a special value placed on practical understanding. This is specially evident in the question of self-knowledge. It is not enough for the soul to have the certitude of faith that God is provident; often there is a practical denial of this truth in the lives of even good men. They need to be brought to a concrete realization that their actions are in many ways opposed to their theoretical certitudes. Such practical understanding is known as self-knowledge; it has been stressed by all the Saints. There is a wealth of information about it in the great treatises of St. Thomas on the virtues in particular and in his tract on the capital sins. Fr. Garrigou-Lagrange has made excellent use of this material.

The second volume, which we hope will soon appear, will bring to the reader a real insight into the mystical life. One of its most important sections deals with the transition from the ascetical to the mystical life, which is especially marked by the passage from habitual meditation to infused contemplation. This is also the theme of Fr. Diefenbach's little book, *Common Mystic Prayer*, which follows closely Fr. Garrigou-Lagrange's line of thought. The author presents this important state of soul in simple, clear language. He has followed its development step by step and offers much practical advice. He makes a clear distinction between the essential aspects of mystical prayer and the extraordinary phe-

nomena. His book can also serve as an excellent introduction to the subject of mysticism, which is still a terrifying one for many readers.

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Revelation and Response in the Old Testament. By CUTHBERT A. SIMPSON. New York: Columbia University Press, 1947. Pp. 205, with index. $2.50

The author proposes (1) to trace the development of the religion of Israel from its beginnings and to show how the divine revelation—to which this development was the response—was mediated through historical event; (2) to show how the gradual unfolding of Israel's monotheism had as its concomitant a growing awareness of the essential unity of life; (3) to show how the creative minority in Israel were gradually brought to the realization that the community of which they were a part had a supranational significance. He carries his argument only to the exile, but considers it to be the foundation for any succeeding history of revelation in Israel.

This study comprises seven chapters. The first, entitled "Primitive Jahvism," assumes that Israel's religion began as a form of animism concerned with maintaining good relations with the good and bad spirits which filled the desert spaces. Jahveh, as god of the volcano of Sinai and god of the thunderstorm, was of the second category.

Here the author assumes ("we must") that Israel passed from a natural response of self-regarding fear to the response of self-surrendering acceptance, a transition of crucial import in the development of Jahvism. Coming through to the other side of fear, Israel found "at the heart of the destructive forces of nature that which enriched and ennobled life." (p. 6) Reflecting upon this repeated experience, Israel came to believe that it had been chosen by Jahveh to be his people. The author attempts to trace the development of this faith in these pages.

To the obvious objection that such an explanation is inadequate, pernicious and nothing but emotionalism, the author proceeds to clarify his terms. It is equally absurd, he states, to suggest that man can reason his way to a real awareness of God. The Wholly Other is beyond that. Hence the primitive experience of Israel, though partial, is valid. Can it be said to be a "response to revelation?" By revelation he means "that divine activity which has as its purpose the freeing of man from those interior tendencies which, if yielded to, will drive him to inevitable frustration . . . it is much more than a simple disclosure of objective truth by God . . . it involves also an empowering of the will to conform itself to the truth

which has thus been made known; and this in such a way as not to destroy the freedom which it is the purpose of revelation to bring to fruition, or to weaken the personality which it is intended to mature." (p. 10)

It follows that God teaches the fact of "human conditionedness with a strange and terrible respect for man's freedom." (p. 12) Compelling though this inner compulsion may be (especially in the case of the prophets), it is always man's responsibility whether he accepts or rejects it. Israel accepted, or responded to this revelation, and in so doing, developed its theology.

In the fulness of time, when civilization had developed to a point where the salvation of mankind from the frustration of self-centered power called for the creation of a people aware of the transcendence and centrality of God, Israel was singled out from among all the nations to act as the agent of redemption. It took Israel a long time to realize that Jahveh was a God not only of nature but of history. (p. 17) Recognizing God as the god of war (and on their side) was an experience which, while it lasted, unified life in a momentary emotional monotheism. Primitive Jahvism therefore contained in itself the germ of the later reasoned ethical montheism. (p. 20)

More than a momentary unification of life, or emotional surrender of self, was required. All life had to be related to Jahveh. The slow recognition of this demand and the painful endeavor to meet it is another of the lines in the complex pattern of the Old Testament.

From the many tales woven around the god of Kadesh, Jahveh of Sinai took over the new qualities of justice, creativity, and responsiveness to human need. The assimilative process began at Kadesh, whose priesthood and sanctuary Israel took over, and whose god was identified with Jahveh. Nor was this any ordinary syncretism, because of Israel's extraordinary drive towards monotheism. (p. 28)

Chapter II deals with Moses. He was never in Egypt, says the author. (p. 33 f.) He occupied too influential a post at Kadesh to be a newcomer there. But he was the representative and leader of the creative minority in the community which had been brought into being by the fusion of primitive Jahvism with the religion of Kadesh, and he was the agent through whom the clans were brought to make the response which gave enduring meaning to the events of the exodus.

In Chapter III Israel is observed in its contact with and adaptation of Canaanite baalism as the source of creative power manifested in nature. The local gods came to be identified with Jahveh.

The next chapter treats of the institutionalization of Jahvism with the coming of the monarchy. From the evils to which this step led Jahvism was saved by the prophets who revolted against power politics.

Chapter V states that J^1 and J^2 are the editors or revisors of Israelitic traditions. It was J^1 who organized the traditions of the southern kingdom. J^2 painted on a wider canvas, molding and adapting the Sinai tradition

against a world background, where necessary adding and manipulating the history of the patriarchs; by joining the Sinai tradition to that of Kadesh, he enriched Jahvism with the covenant idea. At any rate, when he drew back from his task, he had effected a delicate balance between the North and the South, and Jahvism was ready for the next step, which however it is not the author's purpose to pursue.

Thus far we have allowed the author to speak for himself, using his terms whenever possible, in order to grasp his meaning and thesis. The reading of this volume will provide an opportunity to reconsider our own position in regard to the problems it raises. It will at least serve to focus attention anew on the complexity of the literary as well as the historical problems of the Old Testament. However, it is now our intention to cast a critical eye upon the result of the author's own thinking.

To begin, the author states that "It is now generally recognized [*sic!*] that Sinai was in Midian in Arabia, at Kadesh (pp. 24, 27, 37, 99 f.); Mt. Horeb in the Sinai peninsula was the mountain of Jahveh according to the northern tradition." (p. 157, n. 2) As his authority he quotes Wellhausen (English edition of 1885), who is notorious for his contemptuous attitude towards topography and who once dismussed all such discussions as both a waste of time and an occupation for dabblers. It is true that there are some now extinct volcanoes in Midian, but to locate Sinai in this region is most arbitrary, for, whatever the theory, the stages of the exodus described in the Bible hardly fit this route, and the fifteen hundred-year old tradition which places Sinai in the southern portion of the Sinai peninsula could hardly have arisen if it had not historical basis in fact.

The historicity and trustworthiness of the writers of the various books (or documents) is frequently questioned. The author's theory has colored his interpretation of the facts. He holds, for example, that it was a later literary tradition which transformed the local official who persecuted the (few!) tribesmen in Egypt into the imposing figure of the pharao. (p. 30 f.) Miriam is looked upon, not as Moses' sister, but rather as a prominent member of the Kadesh community ,and her story is said to reflect the resentment against Israel felt by devotees of Kadesh's old god. (p. 47) Abraham was adopted into Jahvism from the southern (Hebron) tradition, and *post factum* was claimed as a father. Isaac and Jacob are looked upon as legendary figures. (p. 56 f.) Leah and Rachel were figures used to link together into one tradition the tribes of the north and the south. Also legendary to a great degree are the exodus and desert tradition and the Elijah tales.

Little if anything constructive and of lasting value can be obtained by such an exegesis of the texts. It is arbitrary to an extreme. On one occasion (p. 59) the author himself senses the frailty of his intepretation (*in re* Rachel and Leah at least), for he is obliged to write: "It is scarcely

necessary again to call attention to the extraordinary skill with which this mass of material . . . was organized into a unity and related to the Jahvist tradition of the desert." Indeed, it should scarcely be necessary to dissect such a skillfully constructed tale, when all the evidence points to its genuineness. As a matter of fact, it may be said that the author has raised some outmoded ghosts that sound scientific scholars thankfully—but, it appears, too optimistically—had thought to have been laid definitely to rest.

Briefly to mention other questionable positions taken by the author: he speaks of the *Hexateuch,* merely in passing to be sure, but this is hardly to be described as scientific. He holds (shall we say boldly?) to the southern entry of some of the tribes into Canaan (p. 48; p. 164, n. 3), a position hardly justifiable by the texts. Isaias 7, 14 is completely passed over in his treatment of the incident of which it plays the most important part. And to cap the climax, the hoary old tale proposed by Philo, the Manichaeans, and John Milton (but by no serious scholar) that the story of the fall of man was basically the attainment of sex consciousness (p. 126 f.) is again raised from the oblivion into which it had been enterred by sound criticism.

For many of these positions, however, the ground or framework was laid in the opening chapter of the book. It bears the title " Primitive Jahvism." The adjective " primitive " is, in its implications, pejorative. It implies here an evolution from animism to monotheism, from the less perfect to the more perfect, somewhat in the hegelian manner of thesis, antithesis, and synthesis. The position cannot be justified. Dr. Albright of Johns Hopkins, America's outstanding orientalist, utters these words which Mr. Simpson might read and ponder: " I fail absolutely to see that they [the assured results of modern Biblical criticism] carry the implications for the religious evolution of Israel with which they are generally credited . . . Only the most extreme criticism can see any appreciable difference between the God of Moses in JE and the God of Jeremiah, or between the God of Elijah and the God of Deutero-Isaiah. The rebellion against historicism . . is justified, yet it should . . . be . . . rather against the unilateral theory of historical evolution which makes such an unjustified cleft between the official religion of earlier and/or later Israel." (Journal of Bibl. Lit., 1940, pp. 110-111 *passim*)

There is certainly room for a middle position between that of extreme criticism, which hold for an essential evolution of religion, and that somewhat rabbinical theory according to which the Bible and its content has been given to us all at once and completely, like something dropped from Heaven (or Sinai), or like Minerva stepping forth from Zeus' brain. The middle position would hold for an evolution or religious thought in the sense of an increase in the light, whereby men were led to a deeper understanding of a religious truth previously revealed. Hence Israel did, over the

centuries, come to a clearer idea of God, of the divine nature and of the divine attributes. But what is perfectly clear is that there was no " drive towards monotheism "; monotheism was the primitive notion of God, and is still the primitive notion of God in the sense that it is fundamental to an understanding of Israel's religion.

The miracle of Israel consists precisely in the fact that it possessed from the beginning something absolutely unique among the religions of the time—an idea of God who was one, without consort, creator and ruler of the world. And it is utterly improbable and from a human point of view impossible that Israel, living as it did in the midst of peoples whose notions of the deity were crude and polytheistic, would ever have arrived at its transcendent notion of God without a divine intervention or revelation.

Pages 10-15, which treat of revelation and the response to it, lack precision. Revelation is said to be " an empowering of the will to conform itself to the truth which has thus been made known " (p. 10), but revelation is distinct from the actual grace whereby man's will is moved to act. In revelation the recipient is completely passive while God lifts a corner of the veil which hides the divine life. There is no question of a man's active participation in the act of revealing. At the same time, however, his liberty remains inviolate, for God is so powerful that He can move free men according to their natures, i. e., freely but with infallible certitude of the result. If this is what the author intended to communicate by his " inner compulsion," all well and good, but the impression left on this reader was that the inner compulsion was rather ineffective, that God could only go so far, and that He was in some measure dependent upon the reaction of the human being to whom His revelation was made.

Viewing this work as a whole, it is difficult to be impressed or convinced. There is always something suspicious about the orderly and neat division of thought, especially religious thought, into periods and epochs, following a pattern so enticingly simple as evolution. The work of reconstruction is always fraught with danger, and the danger should be faced with great circumspection, great objectivity, and great scholarship. The present work does not seem to reflect these saving virtues.

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BRIEF NOTICES

Ta'līm al-Muta'allim—Tarīq at-Ta'allum. By Az-Zarnuji. (Instruction of the Student: The Method of Learning. Trans. by G. E. von Grunebaum and T. M. Abel.) New York: King's Crown Press, 1947. Pp. 78, with index. $2.00.

Heirs of the Prophets. By Samuel M. Zwemer. Chicago: The Moody Press, 1946. Pp. 137. $2.00.

From the aspects of missionary work, of our present "one-world" political ambitions, and also with a view to philosophical stimulation, the western world can do well to become more intimately acquainted with the thought and traditions of the orient.

The first of these two books, a translation from a medieval Mohammedan author, is an essay in the philosophy and psychology of Moslem education which includes interesting comments on such topics as the nature, purpose, time, and methods of study as well as the moral and intellectual habits of the good student. The difficulty with Mohammedan education, as the westerner reading this book will discover, is too much emphasis on static traditions, studied by mechanical memorizing, and not enough stress on progressive thinking. Until this frozen formalism is melted, the Moslem world is not likely to return, in a sort of Oxford movement, to a rational probing of its roots that would be so salutary in turning the orient, on a large scale, to genuine truth.

The second book, written from a practical viewpoint by a man who has spent forty years in missionary work, describes the hierarchy of the Moslem clergy with the thought that, in the Mohammedan world, "the key to understanding of the masses lies in personal friendship with their clergy, the so-called *imams, mullahs,* and *sheikhs.*" (p. 8) This little book not only describes the status of official personnel in Mohammedanism but includes descriptions of Moslem functions and ceremonies that will be of interest to the philosopher of religion.

The Red Prussian. By Leopold Schwarzschild. New York: Scribners, 1947. Pp. 432, with index. $4.00.

An *ad hominem* argument by itself is invalid. But philosophers of action cannot help but be at least suspected when their own lives exemplify the very negation of the principles which they preach. Such a philosopher was Karl Marx. Heroized by leftist thinkers, he was in reality a compromiser

preaching justice, a pamphleteer posing as an economist, an intriguer condemning intrigue, a parasite declaring for independent action, and an egoist advocating fraternity and equality among men. Such are conclusions that can be drawn from this book, based largely on the famous Marx-Engels correspondence and revealing personal insights into Marx, the man.

A Hegelian without Hegel's speculative power, Marx was obsessed by prejudices for which he sought philosophical reasons. His economic theory of history was, for instance, not the fruit of detached meditation but an after-thought which seemed to justify the personal bias, the convenient dream, of an agitator that the present economic system was doomed. In the face of evidence contrary to his theory of history, Marx blithely closed his eyes.

This easy-reading translation from the German presents some sporadic insights into Marxian philosophy in addition to the biographical data which are indeed too local in character by reason of the almost complete reliance on the Marx-Engels letters. Had the author ranged desirably beyond this correspondence, he might have provided more material on the relation of Hegelianism and Marx and also on the influences exerted in the final Marxian synthesis by the French and English schools of economics.

The New Dictionary of Psychology. By Philip Lawrence Harriman. New York: The Philosophical Library, 1947. Pp. 364. $5.00.

The Philosophical Library in its dictionary of philosophy was not always happy in its choice of editorial material. Like its predecessor, the present work is not likely to be of great assistance to the specialist, philosopher and psychologist alike.

Psychology is, of course, by etymology and by the philosophy of a considerable number of contemporary psychologists, the study of the soul or mind. But "soul," in the present work, is not defined at all, and mind, without being defined, is simply mentioned in a definition of "mind-body problem." Such a glaring deficiency will not appeal to sound philosophical psychology nor to the scientific psychologists who have seen the need for an approach to their subject beyond the mere analytic method.

Many of the definitions are too brief and cryptic; terms of scholastic origin such as "idea," "intelligence," "abstraction," and "will" have been incorrectly or incompletely defined; important terms have also been omitted, not only in the case of scholastic psychology but also in the case of modern systems such as "holism" and Sartre's "existential psychoanalysis" which could at least have merited mention.

Dictionaries of this sort are of value if they provide fuller discussions than those available in the general unabridged dictionaries which specialists

usually have available. The present work does not stand out as an addition to knowledge easily accessible elsewhere. In general, not enough space has been allotted to the concepts defined, as an apparent attempt to keep the book within its present size. Finally, the present dictionary is the work of one man. Psychology is too vast to expect a single individual to produce an accurate, adequate account of all its concepts. A good dictionary of psychology, with handy q/v references, would be welcomed by contemporary scholarship.

The Domain of Reality. By William Gerber. New York: King's Crown Press, 1946. Pp. 81, with index. $1.50.

This book is an attempt to define the term "reality" in such a way as a) to provide by the scientific method a rule for classifying an entity as real; b) to conform to common usage of terms; and c) to avoid disagreements between various schools and thinkers. The general definition turns out to be: "A thing is real in a particular context as far as it functions in that context." (p. 13)

A context is defined in terms of another context. Do we not then have the case of the infinite regress? No, the author declares, for there is "an inter-functioning of contexts rather than an infinite regress." (p. 23) But such a solution to the problem is merely verbal. A vicious circle is but an infinite regress re-worded.

The difficulty with consistency and functional theories of truth, both of which would seem included in Gerber's definition of the real, is that coherence by itself is meaningless. If consistency is the norm of universal truth, as it is in the canons of pure science, then anyone who is consistently wrong could still be called right. Hegel, after his initial premise, the mingling of contradictories, elaborated a coherent system. Marxians are as consistent as philosophers who accept only science and its method. One could begin with any random postulate, as science does, and by judging everything as meaningless which does not fit this postulate, he could work out a consistent system. Obviously, to define the real realistically there must be at least one pivotal point where self-evidence is acknowledged, where a thing is seen to be what it is. Any other definition of the real is a verbalism.

The thesis of this book, as in the case of so much other modern literature that passes for philosophy, is that it enshrines the arbitrary and anthropomorphic postulate that the scientific method is a "disinterested analytical scrutiny" (p. 2) which can solve philosophical problems. Unless one plants his feet firmly in the proven grounds of a metaphysic, to seek meaning through the scientific method itself is a meaningless quest and question.

The Evolution of Physics. By Carl Trueblood Chase. New York: Van Nostrand, 1947. Pp. 203, with index. $2.50.

This book is a summary of physics from the days of the Greeks to the release of atomic energy. It is unfortunately sketchy in many parts. The middle ages, as usual in so many modern discussions of the history of science, are elided, despite the fact that Buridan and others really anticipated the universal mechanics which Newton later formulated. The astronomy of the Greeks, who managed to compute the approximate circumference of the earth despite the lack of scientific techniques as they are now refined, is likewise slighted. No one can write a history of physics without, if not an explanation of, at least a respect for, the forces that brought the sun up to the horizon at the dawn of modern science. In the field of post-Newtonian physics itself, there are also lacunae. The general theory of relativity is given only scant treatment. The depth of its conflict with the quantum system is not discussed. This suggests that the book is too much of a recital without an attempt to appraise the present-day concepts of physics so that its main direction can be discerned.

Nevertheless, this book can be profitable reading to a philosopher as an introduction to the physical picture of matter in the atomic age. It is, of course, a fallacy to insist that philosophers must be physicists in order to assess physics. But the temper of the modern mind is such that a philosopher is greatly aided in his work of making his timeless truth timely if he can appreciate the direction in which physics is moving so that, pressing this movement to its conclusion, he may the more effectively disclose its shortcomings as a science of the ultimate.

The genuine philosopher would be inclined to smile at such naivete as this: "An acceptance of the Copernican idea in which the earth lost its commanding position at the center of the universe might well be the beginning of the end for dogmatic religion." (p. 18) Certainly a sounder thinking in philosophy would also reject the thesis of the final paragraph, implying that the scientist, as such, is qualified to discuss the ethical problems in the use of atomic energy.

Thomas Edward Shields. By Justine Ward. New York: Scribners, 1947. Pp. 309, with index. $3.50.

Thomas Edward Shields is, in the words of Monsignor Patrick J. McCormick's preface to this book, "the outstanding Catholic educational leader of his time." Important as he was in the field of administration where he waged and won important battles, Shields, the philosopher of education, has left a corpus of ideas that can still prove fertile for speculation in this twenty-fifth year after his death. His own boyhood experi-

ences, together with his experiences of student days with Dewey and Hall, urged him to his methodological principle that truth must be made functional. He attempted to marshal his scientific training from biology and psychology into techniques of teaching religion that de-emphasized mere memory and aimed at doing and acting.

In the eventual appraisal of James and especially of Dewey, Shields' ideas must be taken into account. For such a project, this present work will provide interesting background. Written by one of Shields' associates, the book is a delightful blend of fact, philosophy, and humor which cannot help but be of interest to a philosopher for both technical and pastime reading.

Modern Christian Revolutionaries. Edited by DONALD ATTWATER. New York: The Devin-Adair Company, 1947. Pp. 390. $4.00.

The Christian revolutionaries treated in this book are Soren Kierkegaard, G. K. Chesterton, Eric Gill, Charles Freer Andrews, and Nicolas Berdyaev. The authors of the essays on these men are, with the exception of Attwater, not particularly well known in this country. A brief biographical paragraph on each is supplied.

The essays, apparently intended for the layman, are estimates of the various revolutionaries. Biographical data are blended in with the critical material. In the case of the revolutionaries mentioned, their lives were so surprisingly parallel, or at least revealing, with respect to their thoughts that the biographical devices employed are particularly effective. Attwater informs us in his introduction that: " The contents of this volume are the first instalment of a series being published in England. . . . The series was conceived in midwar, in the black summer of 1941, and the first separate little books were not born till the fall of 1945." Such a practical way of presenting philosophy and theology as the style of this book reflects is a commendable thing that is certainly worthy of consideration by those scholars in this country who have long bemoaned the gulf which separates their world and that of the masses.

Admirers of G. K. Chesterton could hardly measure the fury which their hero would muster against the estimates of his critic, F. A. Lea. G. K.'s conversion was, we are told, " his first great error." (p. 99) Lea believes that Chesterton's mind was inclined by nature to submit itself to authority. But such, it can be replied, is the inclination of man himself. It is realistic, human, natural to acknowledge dependence, to follow first principles, to believe in God. In more pointed reference to Lea's opinion, Chesterton might easily have said that all men are faced with the alternative of choosing either a true authority or a false one. There is no middle course of " authority-lessness." Finally, and *ad hominem*, this note of submissive-

ness played into the symphony that is Chesterton's life does not square with the notion of Christian revolutionary.

The author believes that Chesterton missed in life what is universal and catholic by joining the Roman Catholic Church. Thus did Chesterton fall, it is said, " below the level of the highest life-conception of his time and country." (p. 154) But time and country are localizing and particularizing things. Chesterton joined a universal and apostolic Church. Asking a man to take his moral pattern from the life-conception of a particular time and a particular place is one of those relativisms which Chesterton so vigorously condemned. On such a score, a Nazi could be complimented because he realized the pattern which his environment held up.

In explaining the paradox, Lea says that reality itself is illogical since it is in development and is thus constantly uniting what is not to what is. But this reference to the changing world does not explain Chesterton's use of the paradox in the world of philosophy and theology.

Lea uses the expression " democratic emotion " (p. 129 and p. 131), as though it were the foundation of democracy. If he were familiar with Chesterton's basic meanings, he would know how much the great controversialist rebelled against mere sentimentality. Fraternal love is not an emotion. It is an act of will.

The essay on Kierkegaard is a good introduction to the thought of this enigmatic thinker who is having his peak of popularity a hundred years after his death. The account, however, is inaccurate on several points. It is also to be charged with inconsistency. The opinion is rejected that Kierkegaard's thought " implies ' no external standard of truth and morality above the individual decision.' " (p. 23) Later on, (p. 31) it is said that there is a " fathomless abyss," " a leap in the dark." What is lacking in this essay is a proper distinction between the Kierkegaard of intention and the Kierkegaard who was led to the contemporary extremisms which this reviewer believes to be Kierkegaard's logical conclusion. Kierkegaard never really reached God in his dialectic. He intended to do so, but he is a Christian theologian much more by intention than by the actual logic of his arguments. His logic, it would seem, leaves him engulfed in the abyss of dread and despair.

Attwater's essay on Gill is perhaps the most satisfactory study in the collection. It explains Gill's theories on work and art, making Gill seem much less the eccentric which he is sometimes pictured as being. C. F. Andrews, the British missionary to India, is described as a Christian revolutionary because of his apostolic work among the downtrodden. His philosophy, and one dare say, his politics as stated in twenty-nine published works, are presented.

Berdyaev's philosophy, rejoining that of Kierkegaard on some profound points, is well explained except perhaps for the failure to focus his notion of *wisdom* as participated by the historical process. Berdyaev, as an existen-

tialist, joins hands with Kierkegaard. As a critic of the machine age, he ties in with Gill and Chesterton. The views of Andrews likewise had economic implications. Thus there is perhaps unwittingly brought out the true meaning of Christianity which, because it works at a deeper layer of reality than mere matter, is much more radical and revolutionary than even its devotees are sometimes aware. The Christian revolution works out from the depths of man where we find that principle of simplicity which alone can solve the complex problems of our age.

The Goodness of Being in Thomistic Philosophy and its Contemporary Significance. By Sister Enid Smith, O. S. B. Washington, D. C.: The Catholic University of America Press, 1947. Pp. 155, with index. $2.50.

This is a doctoral dissertation of the School of Philosophy at the Catholic University of America. Its title is misleading. The "contemporary" aspect of goodness is treated in the form of a sixteen-page chapter on Ralph Barton Perry. Whether Perry's notions are typical of the contemporary attitude in axiology will be questioned by the discerning reader. C. I. Lewis' latest works serves to indicate that Perry's value-theory is not even typical of his own Harvard University.

Of heavier weight in evaluating this book is the author's method. The comparison of Perry and St. Thomas is made only in general terms. The author seems much more concerned with showing the differences between these two men rather than their agreements. Outside of the initial chapter, Perry's ideas are hardly mentioned. The latter part of the book thus becomes an exposition of the philosophy of goodness in Thomism. Such a treatment is not without its merit. If nothing else, the study offers a compendium of Thomistic views which should make handy reference material for the specialist in philosophy. However, if it has in mind a *rapprochement* between St. Thomas and contemporary thought, relating perhaps the truths of both as universal to particular rather than as two parallel lines, then this study is not really adequate.

Aquinas, following Augustine, stated that no philosophy could be completely wrong. At a time when Thomism must face a world that does not understand its language or respect its traditions, its vitalizing influence might be profitably, certainly more effortlessly, extended to the various philosophies and philosophers if points of agreement could be searched out and probed through whenever possible. Thomists in many cases have forgotten their ability to distinguish.

The readers of this book will want to know whether the *value* discussed by Perry has the same meaning as *bonum* in the vocabulary of Aquinas. Is this study a lumping of all value, both that apprehended intellectually

and that grasped by the cogitative power? Or would not a distinction here enable us to accept a measure of Perry's dialectic? Further, if we substituted the notion of man as man for that of the individual man, viewing the value problem by its relation to a kind of Platonic archetype, value could be defined in terms of interest. Value would thus become that which interests man as man, hence being conformable to his nature as his good.

In approaching the problem of being as St. Thomas solves it, the author begins from the outset with strict metaphysics and keeps the discussion from thence onward in the third degree of abstraction. In defining truth and goodness, it would have been helpful to insist rather strongly on the way in which truth and goodness are related. In the *De Veritate*, Aquinas accepted Anselm's definition of a thing as ontologically true when it has what it ought to have, fulfills what it ought to fulfill. In the *Summa Theologica* (I, q. 21, a. 2), Aquinas in one sense identifies justice and truth. All this brings the metaphysics of knowledge and the metaphysics of being, especially in its value aspect, strikingly close together. From such an angle, Perry's avowed realism in epistemology, his description of evaluating in psychology, both in fact would lead toward either a kindred realism in regard to value or the solipsism which Perry and his cohorts so strongly oppose.

The author has a chapter on the three ways in which a thing is said to be good: in its essential being; in its added perfections; and in its order to an end. There is likewise a chapter on the so-called axioms of goodness: *bonum est diffusivum sui esse* and *bonum est communicativum sui*. There is likewise a chapter on the kinds of goodness. This juncture, it would seem, might have been another apt locus for the direct confronting of Perry and Thomism. *Bonum utile* and *bonum delectabile* are not without reference to the interest theory; both, however, lead to the *bonum honestum* at the risk of an infinite series which would make even useful and delectable goods indeterminate.

The final chapter, the best, concerns the problem of evil and the solution brought to bear by Thomism on this point. Value-theories, unless they solve this most intimate of problems, must be judged inadequate and gratuitous. The modern algebraic mind considers evil as error rather than as the evil it is. Such an explanation cannot long satisfy the inquiring mind. What indeed is the opposite of value? Certainly it is not the non-value or the indifferent. On the other hand, to speak of bad value is like speaking of bad goodness. St. Thomas' thought can answer the real problem of evil. Nowhere does the psychological approach of Perry and his master James more thunderously break down.

History is on Our Side. By Joseph Needham. New York: The Macmillan Company, 1947. Pp. 226, with index. $2.75.

The author of this book is a distinguished biochemist of the University of Cambridge, who has made some original contributions in the study of differentiation in the developing embryo. A man of rare culture, he "reads Chinese classics in the original," according to the jacket, "translates Polish literature in his spare time, and studies Aztec philology as a relaxation." His style, unusually alive for a man of technical achievement, is in delightful contrast to so much of the heavy scholarship in our age.

This array of fine talent, Needham sets to the rhythm of dialectical materialism. Evolution, so often taken as a dogma today instead of the scientific theory which it still remains, leads Needham to the Marx-Engels philosophy of history. But as with the Marxians, the classless society to emerge from the historical processes is not only unavoidable but desirable for its own sake. Thus science which, in Bergson's classic simile came down from heaven to earth on the inclined plane of Galileo is envisioned by Marxian scientists like Needham and his fellow-countryman, J. B. S. Haldane, as bringing heaven down to earth along with it. History is on the side of man's friends, Needham holds, because it will inevitably bring about what they are trying to procure for him.

This book comprises a series of essays written over the period from 1936 to 1941. Almost anyone of these compositions could serve as a point of departure to display the inadequacy of Needham's whole idea. If evolution were conceived according to the laws of thermodynamics, particularly the law of entropy, the result would not come out to be the perfection of man and his society. Entropy is a kind of dying rather than progression, a dedifferentiation rather than the differentiation which marks organism and civilization in their growth. This thermodynamical approach is regarded by many competent scientists as being the fundamental empirical approach to reality. A related idea from Needham's professional vocabulary can be introduced here, that of the biochemical organizer which apparently "directs" embryonic differentiation. How can the specialization achieved by these organizers be explained if the net result of evolutionary developments is to be the levelling dedifferentiation of men into a classless, legalitarian status. In brief, if history is on the march toward a classless society, then the following anomalies must be explained: if the movement takes place according to thermodynamical laws only it is not progress, and if it takes place according to biological laws, then it is directed toward specialization rather than classlessness. In the first case, communism would not be desirable; and in the second case, it would not be inevitable.

The first essay, entitled "The Two Faces of Christianity," purports to show that the traditional western religion has always attempted a synthesis of two incompatible predecessors, the materialism of "Hebrew Apo-

calypticism" and the intense spiritualism of Greek Neo-Platonism. Needham would accept the former system only. "The christian religion, in fact, has always contained communist elements implicit within it, but this life of active apocalptic has always been smothered by the dead weight of mystical Neo-Platonism so convenient to the possessing class." Needham's condemnation of mysticism stands in sharp contrast to his earlier philosophy as stated in *The Sceptical Biologist*. There, he argued that the problem of life could be approached either from the viewpoint of mechanism or of teleology. These two conflicting views could be united, he maintained, by a mystical intuition. In his present context, Needham must logically drag his own former self into his courtroom. What assurance can he provide his readers that he will not some day reject these present views just as he now parts company with his earlier philosophy?

Needham's wish to brand communism as Christianity in practice shows a complete lack of appreciation of what Christianity is. Such a statement uses matter as a frame of reference for evaluating Christianity rather than takes root in the primacy of spirit. As Christopher Dawson says, nothing could be more fatal to the nature of the Church, Her spirit and Her efficacy, than a return to Her for purely economic reasons. The Church has the power to effect economic justice only because She insists that justice as such is not defined through economics.

The chapter on hylomorphism displays the typical misunderstanding of matter and form. Form is presented in terms of the accidental form of a vase. Rejected as unobservable to the techniques of empirical science, hylomorphism is today supplanted, Needham finds, by an account of matter in terms of energy and organization. This is strangely like the way in which hylosystemists define the atom. Needham's solution, like that of hylosystemism, is purely verbal. Where did the organization arise if not in terms of a matrix or ground realized from within?

This book is based on a number of presuppositions, materialism, the exclusive validity of the scientific method, and the dialectical meaning of development. Such postulates will not be admitted by realists. All of them, when mistaken for philosophy, are dogmas. They are the prelude to observations rather than their result.

St. Thomas and Epistemology. By Louis-Marie Regis, O. P. Milwaukee: The Marquette University Press, 1946. Pp. 95. $1.50.

This is the printed version of the tenth in the series of Aquinas lectures which the Aristotelian Society of Marquette University is laudably providing to American philosophy. The present volume, by the director of the Albert the Great Institute of Medieval Studies at the University of Montreal, continues the high level set by its predecessors. Presenting the

subject in a chatty style that at times almost conceals a profundity of thought, Père Regis makes out the case against the critical philosophy which fails in its content because it misconceives its own nature and place in intellectual enterprises.

Included in his adversaries are Descartes and Kant and also the would-be neothomistic approaches of Msgr. Noel and Père Roland-Gosselin. Descartes, it is shown, attempted to provide philosophy with a method that would unify it, but since Descartes there has been nothing but a precession of disagreement among philosophers. Kant attempted to provide philosophy with the same kind of certitude as found in the Newtonian physics of his day. But with the atom-smashing of Newton's world by twentieth-century physics, Newton has been abandoned. Noel and Roland-Gosselin would assemble a critique of knowledge from what is implicit in the Thomistic tradition and thus provide a Thomistic criteriology as the prolegomenon to St. Thomas' sciences of real being.

In criticism of these doctrines, Père Regis points up that St. Thomas' philosophy is not the equivalent of common sense and that when Descartes and Kant emphasize the errors into which common sense, unregimented by their formalism, is likely to fall, they must exempt genuine philosophy from the scope of their indictment. The reader may feel need here for a clarification of the relation between common sense and true philosophy, between the plain man's notion of being and the *ens ut ens* of the metaphysician. This would seem more of a problem that the author's treatment indicates. As the author says, the being conceived by the plain man and the notion of the metaphysician are not the same, but he fails to clarify the subject further. Certainly there is a relationship that must also be admitted between common sense and metaphysics, not only in the matter of content but also in the matter of an organon, logical and even linguistic. Whatever be their differences, the world studied by the metaphysician is the same world as that apprehended by the ordinary man.

From a positive viewpoint, the author, describing knowledge in terms of its various sources, in sensation and intellection, defines the science of epistemology in terms of the following questions: "(1) are the knowledges that present themselves as true really true? (2) if they are true, how is this multitude of truths to be explained? (3) if they are multiple, how is their multiplicity to be reduced to unity?" (p 43) Viewed in this way, epistemology becomes what its name indicates—the science of knowledges. The author solves the critical question by showing that idealism is a monistic solution which, by its very lack of material to organize, would make impossible the science of order that is philosophy. The author's approach, he admits, implies that epistemology derives from metaphysics and that metaphysics has the last word to say on what reality is. "The plurality of truth, point of departure of all philosophic epistemology, is made possible and understandable, then, only when metaphysics has defined

being as multiform and men as possessing a diversity of cognitive principles." (pp. 52-53)

The author closes with a striking presentation of knowledge in terms of the four-fold causality: the material cause of knowledge is intelligence, the formal cause is being, the efficient cause is man, and the final cause is " a divine mimicry, a kind of sharing in the infinite perfection of God by adding to our own being all the excellences that we find in beings outside of ourselves." (p. 56)

This book, were it read by a modern man persuaded to lay aside his prejudices for a moment, would give pause as an approach to philosophy. Idealism, sensism, skepticism are not only false from a speculative point of view. They are empirically impossible. In an age which leans so heavily toward empiricism, if such a leaning were impartially followed through, the principles so ably defined and defended by Père Regis should be nothing less than conclusive.

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